Panasonic

Operating Instructions

DVD Stereo System

Model No. **SC-VK680**

Before connecting, operating or adjusting this product, please read the instructions completely.
Please keep this manual for future reference.
Your unit may not look exactly the same as illustrated.

Region number
The player plays DVD-Video marked with labels containing the region number or **"ALL"**.

Region	Number
Southeast Asia and Thailand	3
Australia and New Zealand	4

Example: Southeast Asia and Thailand

Operations in these instructions are described using the remote control, but you can do the operations on the main unit if the controls are the same.

DVD VIDEO

COMPACT disc DIGITAL VIDEO

RAM COMPATIBLE PLAYER

DivX®

GA GN

RQTX0282-1L

System	SC-VK680
Main unit	SA-VK680 (1 unit)
Front speakers	SB-PF680 (2 units)
Subwoofer	SB-WAK780 (1 unit)

Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.

CAUTION!

- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**

CAUTION!

**THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.**

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE,

- **DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.**
- **USE ONLY THE RECOMMENDED ACCESSORIES.**
- **DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

The socket outlet shall be installed near the equipment and easily accessible.
The mains plug of the power supply cord shall remain readily operable.
To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from AC receptacle.

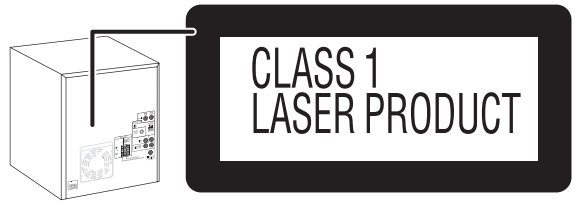
This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

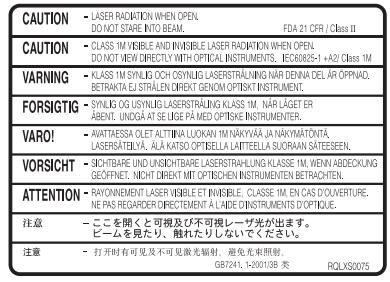
For Southeast Asia and Thailand

THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

For Australia and N.Z

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.





(Inside of product)

For Southeast Asia and Thailand

CAUTION!

The AC voltage is different according to the area.
Be sure to set the proper voltage in your area before use.
(For details, please refer to page 10.)

– If you see this symbol –

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.
If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Accessories

Please check and identify the supplied accessories.

- ☐ 1 AC mains lead **For Southeast Asia** (K2CQ2CA00007)
- ☐ 1 AC mains lead **For Thailand** (K2CP2CA00001)
- ☐ 1 AC mains lead **For Australia and N.Z** (K2CJ2DA00008)
- ☐ 1 AM loop antenna
- ☐ 1 FM indoor antenna
- ☐ 2 Batteries
- ☐ 1 Video cable
- ☐ 1 Remote control (N2QAYB000423)

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Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Place it at least 15 cm away from wall surfaces to avoid distortion and unwanted acoustical effects.

Do not place heavy items on the unit.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock. Do not handle the plug with wet hands. This can cause electric shock.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

Discs information

■ **Commercial discs**

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		DVD-V	High quality movie and music discs.
Video CD		VCD	Music discs with video. Including SVCD (Conforming to IEC62107).
CD		CD	Music discs.

■ **Recorded discs (○: Playable, –: Not playable)**

Disc	Logo	Recorded on a DVD video recorder, etc.		Recorded on a personal computer, etc.					Finalizing[×8]
		DVD-VR [×2]	DVD-V [×4]	WMA	MP3	JPEG	MPEG4 [×6]	DivX [×7]	
DVD-RAM		○	–	–	○	○	○	○	Not necessary
DVD-R/RW		○	○	–	○	○	○	○	Necessary
DVD-R DL		○[×3]	○	–	–	–	–	–	Necessary
+R/+RW	–	–	–	(○)[×5]	–	–	–	–	–	Necessary
+R DL	–	–	–	(○)[×5]	–	–	–	–	–	Necessary
CD-R/RW[×1]	–	–	–	–	○	○	○	○	○	Necessary [×9]

- It may not be possible to play all the above-mentioned discs in some cases due to the type of disc, the condition of the recording, the recording method, or how the files were created (➡ page 6, Tips for making data discs).

[×1] This unit can play CD-R/RW recorded with CD-DA or Video CD format.

[×2] Discs recorded on DVD video recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).

[×3] Discs recorded on DVD video recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).

[×4] Discs recorded on DVD video recorders or DVD video cameras using DVD-Video Format.

[×5] Recorded using a format different from DVD-Video Format, therefore, some functions cannot be used.

[×6] MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system].

[×7] Functions added with DivX Ultra are not supported.

[×8] A process that allows play on compatible equipment. To play a disc that is displayed as “Necessary” on this unit, the disc must first be finalized on the device it was recorded on.

[×9] Closing the session will also work.

Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so playback may not be possible.

■ **Video systems**

- This unit can play PAL and NTSC, but your television must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC television.
- This unit can convert NTSC signals to PAL 60 for viewing on a PAL television (➡ page 23, “NTSC DISC OUT” in “VIDEO” menu).

■ **Discs that cannot be played**

Blu-ray, HD DVD, AVCHD discs, DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM that cannot be removed from their cartridges, 2.6-GB and 5.2-GB DVD-RAM, and “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

Tips for making data discs

- When there are more than eight groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

DVD-RAM
- Discs must conform to UDF 2.0.

DVD-R/RW
- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit does not support multi-session. Only the default session is played.

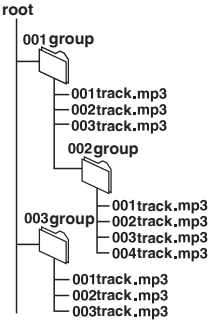
CD-R/RW
- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are many sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

Naming folders and files

Files are treated as contents and folders are treated as groups on this unit.

At the time of recording, prefix folder and file names. This should be with numbers that have an equal number of digits, and should be done in the order you want to play them (this may not work at times). Files must have the extension (➡ below).

Example: **MP3**



WMA (Extension: ".WMA" or ".wma")
- Compatible compression rate: between 48 kbps and 320 kbps.
- You cannot play WMA files that are copy-protected.
- This unit does not support Multiple Bit Rate (MBR).

MP3 (Extension: ".MP3" or ".mp3")
- This unit does not support ID3 tags.
- Sampling frequency and compression rate:
  – DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24 kHz (8 to 160 kbps), 44.1 and 48 kHz (32 to 320 kbps)
  – CD-R/RW: 8, 11.02, 12, 16, 22.05, 24 kHz (8 to 160 kbps), 32, 44.1 and 48 kHz (32 to 320 kbps)

JPEG (Extension: ".JPG", ".jpg", ".JPEG" or ".jpeg")
- JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. Files that have been altered, edited or saved with computer picture editing software may not be displayed.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, and still pictures other than JPEG (Example: TIFF), or play pictures with attached audio.

MPEG4 (Extension: ".ASF" or ".asf")
- You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with Panasonic SD multi cameras or DVD video recorders with this unit.
- The recording date may differ from that of the actual date.

DivX (Extension: ".DIVX", ".divx", ".AVI" or ".avi")
- You can play all versions of DivX® video (including DivX®6) [DivX video system/MP3, Dolby Digital or MPEG audio system] with standard playback of DivX® media files. Functions added with DivX Ultra are not supported.
- DivX files greater than 2 GB or have no index may not be played properly on this unit.
- This unit supports all resolutions up to maximum of 720 x 480 (NTSC)/720 x 576 (PAL).
- You can select up to eight types of audio and subtitles on this unit.

This product is licensed under the MPEG-4 Visual patent portfolio license for the personal and non-commercial use of a consumer for (i) encoding video in compliance with the MPEG-4 Visual Standard ("MPEG-4 Video") and/or (ii) decoding MPEG-4 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed by MPEG LA to provide MPEG-4 Video. No license is granted or shall be implied for any other use. Additional information including that relating to promotional, internal and commercial uses and licensing may be obtained from MPEG LA, LLC. See http://www.mpegla.com.

U.S. Patent Nos. 6,836,549; 6,381,747; 7,050,698; 6,516,132; and 5,583,936.

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Plays DivX® video
DivX® is a registered trademark of DivX, Inc., and is used under license.

ABOUT DIVX VIDEO-ON-DEMAND

This DivX® Certified device must be registered in order to play DivX Video-on-Demand (VOD) content.
First generate the DivX VOD registration code for your device and submit it during the registration process. [Important: DivX VOD content is protected by a DivX DRM (Digital Rights Management) system that restricts playback to registered DivX Certified devices. If you try to play DivX VOD content not authorized for your device, the message “Authorization Error” will be displayed and your content will not play.] Learn more at www.divx.com/vod.

Display the unit’s registration code (➞ page 23, “REGISTRATION” in “OTHERS” menu)

8 alphanumeric characters

- We recommend that you make a note of this code for future reference.
- After playing DivX VOD content for the first time, another registration code is then displayed in “REGISTRATION (DIVX)”. Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit’s code, you will not be able to play this content. (“AUTHORIZATION ERROR” is displayed.)

Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. (“RENTED MOVIE EXPIRED” or “RENTAL EXPIRED” is displayed.)

When playing this content

- The number of remaining plays is reduced by one if
  – you press [⏻] or press [SETUP].
  – you press [■]. [Press [❚❚] (pause) to pause play.]
  – you press [⏮, ⏭] (skip) or [◀◀, ▶▶] (search) etc. and arrive at another content or the start of the content being played.
- The “RESUME” function (➞ page 16, Stop) does not work.

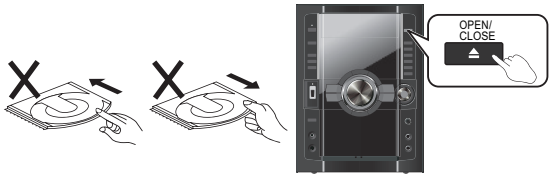
Tray/disc handling procedure

Adhere to the following to avoid problems.

Removing the power plug

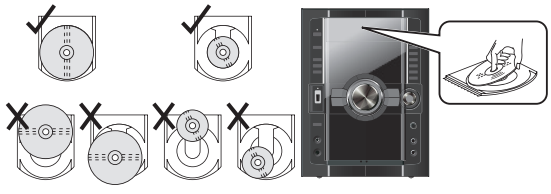
Press [⏻/I] to turn off the unit and remove the power plug only after all the displays have disappeared.

Tray caution



- Always press [⏏, OPEN/CLOSE] to insert or remove a disc.
- Do not push or pull out the tray by hand as this will cause an accident.

Inserting a disc



- Place the disc label up in the center of the tray.
- Insert only one disc into each tray.

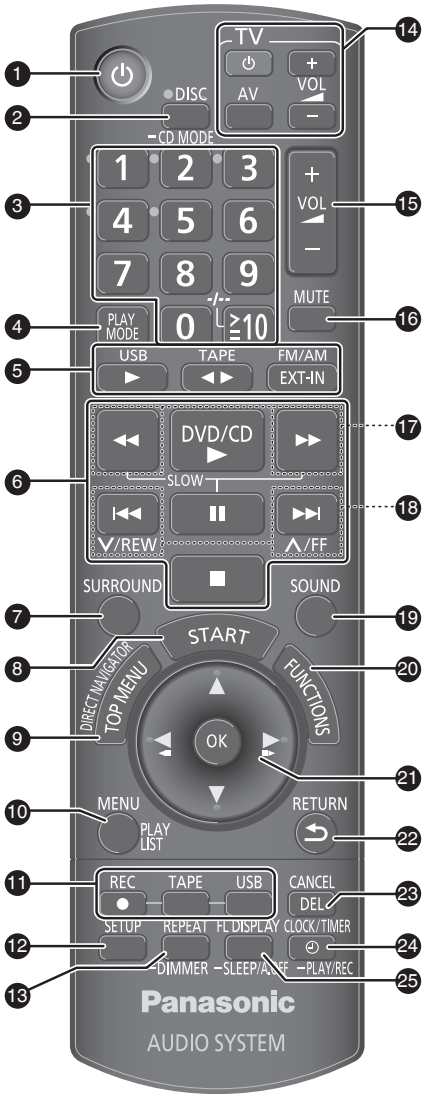
Disc handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other hard writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
  - Discs with exposed adhesive from removed stickers or labels (rented discs, etc).
  - Discs that are badly warped or cracked.
  - Irregularly shaped discs, such as heart shapes.

Cleaning discs

Wipe with a damp cloth and then wipe dry.

Remote control



1. Turn the unit on/off (13, 30)
2. Show disc information/Select a disc (16, 17)
   Play loaded discs in order (17)
3. Select channels and title numbers etc./Enter numbers (16, 20, 22, 33)
4. Random play, Program play (18)
   Tape: Reverse mode selection (24, 25)
   Radio: Band mode selection (24)
5. Source select
   [▶, USB] selector and playback (14, 26, 27)
   [◀▶, TAPE] Tape playback and direction (14, 24, 25)
   EXT-IN, FM/AM:
   FM/AM selection (14, 24)
   MUSIC PORT/AUX selection (14, 31, 32)
6. Basic operations for play (13, 14, 16 to 19, 24 to 30)
7. Select surround sound effects (29)
8. Show START menu (14)
9. Show a disc top menu or program list (16, 19)
10. Show a disc menu or playlist (16, 19, 26)
11. Tape and USB recording functions (25, 26, 27)
12. Change the player settings (13, 22, 27)
13. Repeat play (17)
    Dim the display panel (17)

TV operations 14
(Aim the remote control to a Panasonic TV and press the button. Only works with some models)
[⏻]: turn the TV on/off
[AV]: change the TV's video input mode
[+, −, VOL]: adjust the TV volume (33)

15 Adjust the volume of the main unit (16, 28)

16 Mute the sound (17)

17 Slow motion, search, tuning (16, 24)

18 Skip, rewind, fast forward, Tape Program Sensor, sound quality adjustment, preset channel selection, time adjustment (13, 16, 19, 24, 29, 30)

19 Select sound mode (29)

20 Show on-screen menu (20)

21 Frame-by-frame/Select or register menu items (13, 14, 16, 18, 20, 22, 24, 26, 27, 29)

22 Return to previous screen (16, 20, 22)

23 Cancel an item (16, 18)
Deleting an item (27)

24 Clock and timer setting (13, 30)
PLAY/REC timer on/off (30)

25 Changes the unit's display (16)
Sleep timer, Auto off operation setting (31)

Main unit

1 AC supply indicator (AC IN)
This indicator lights when the unit is connected to the AC mains supply.

2 Standby/on switch (⏻/I)
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
(15, 37)

3 [● REC, USB]
(26, 27, 31, 32)

4 Using surround effect (29)

5 Adjusting subwoofer level (29)

6 [● REC, TAPE]
(25, 28, 31, 32)

7 USB port (26)

8 Deck [▲, OPEN] (24, 25)

9 MUSIC PORT jack (31)

10 Headphone jack 🎧
Reduce the volume level and connect the headphones. Headphones plug type: Ø3.5 mm stereo (not included).
- Avoid listening for prolonged periods of time to prevent hearing damage.
- Excessive sound pressure from earphones and headphones can cause hearing loss.

Disc trays (7, 15) 11

[▲, OPEN/CLOSE] (7, 15) 12

[▲, EXCHANGE] (15) 13
[1 ▶] to [5 ▶]
(disc direct play) (15)

Enhancing bass sound (29) 14

Selecting Manual EQ, adjusting its BASS level (29) 15

[MIN, MIC VOL, MAX] (28) 16

Microphone (MIC 1, MIC 2) jacks (28) 17

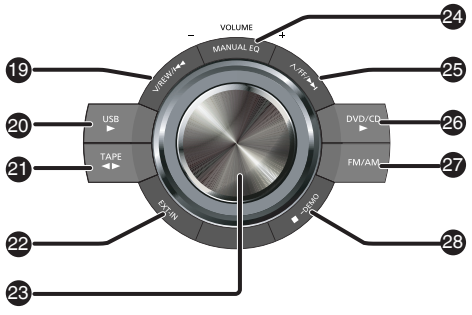
Cassette holder (24, 25) 18

19 25 Skip, rewind, fast forward, Tape Program Sensor, sound quality adjustment, time adjustment
(13, 16, 19, 24, 29, 30)

20 USB selector and playback (14, 27)

21 Tape playback and direction (14, 24)

22 MUSIC PORT/AUX selection (31, 33)



[– VOLUME +] (28) 23

[MANUAL EQ] (29) 24

DVD/CD selector and playback (15) 26

FM/AM selection (24) 27

Stop, DEMO function (13, 24, 25) 28

Television, antenna and AC mains lead connections

Connect the AC mains lead after all other connections are complete.

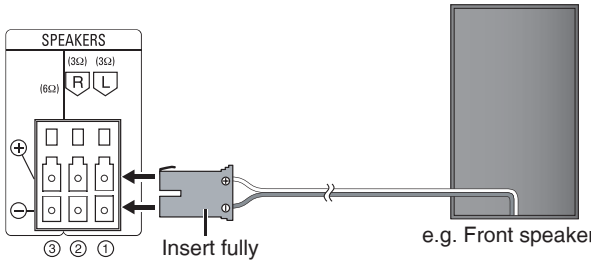
Conserving power

The unit consumes power (approx. 0.4 W) even when it is turned off with [⏻] (main unit: [⏻/I]). To save power when the unit is not to be used for a long time, unplug it from the household AC power socket. You will need to reset some memory items after plugging in the unit.

Speaker connections

Connect the speakers to the main unit with the terminals of the same colour.

Speaker	Terminal/connector colour
① Front speaker (L)	White
② Front speaker (R)	White
③ Subwoofer	Purple

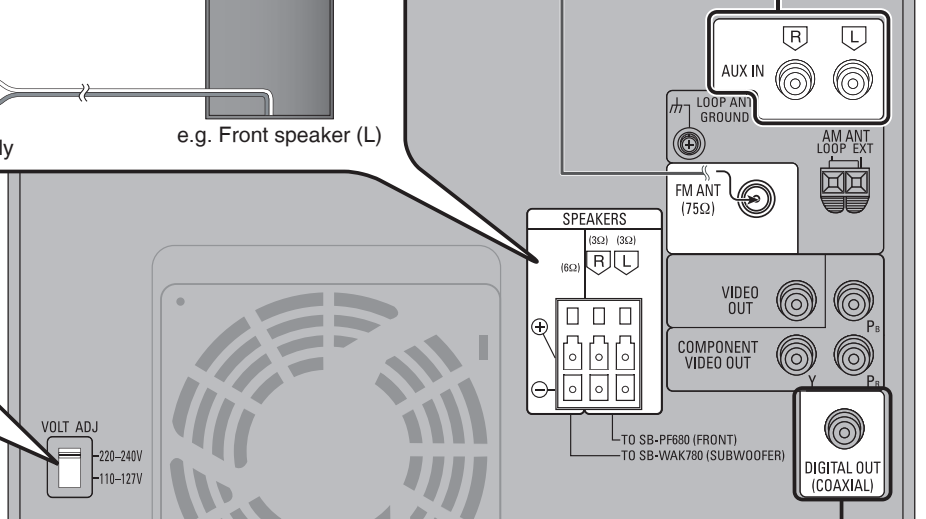


FM indoor antenna

Tape the antenna where reception is best.

Adhesive tape

Please refer to “Using an external unit” on page 32 for more information on AUX connection.



For Southeast Asia and Thailand

Before connecting the AC mains lead, set the voltage.

Voltage Selector

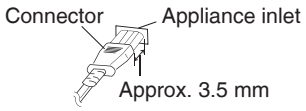
Use a flat-head screwdriver to set the voltage selector on the back of the main unit to the appropriate position for the area in which this system is used.

AC mains lead

To household mains socket

Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.



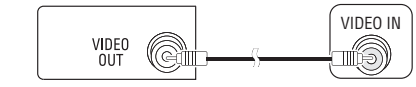
Please refer to “Home Theater—Enjoying more powerful sound” on page 32 for more information on COAXIAL connection.

Note

- The included AC mains lead is for use with this unit only. Do not use it with other equipment.
- Do not use an AC mains lead from other equipment.

Other television connection

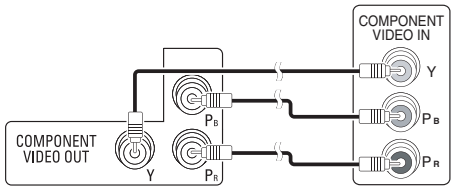
Connecting a television with a VIDEO IN terminal



Rear panel of this unit — Television (not included)

VIDEO OUT terminal
Do not connect the unit through a video cassette recorder, because the picture may not be displayed correctly due to copy guard protection.
Turn the television off before connecting, and refer to the television's operating instructions.

Connecting a television with COMPONENT VIDEO IN terminals



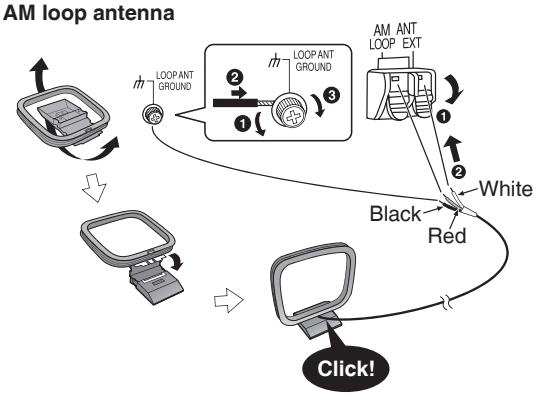
Rear panel of this unit — Television (not included)

COMPONENT VIDEO OUT terminals
These terminals can be used for either interlace or progressive output. Connection using these terminals outputs the colour difference signals (P_B/P_R) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colours. The description of the component video input terminals depends on the television or monitor (e.g. $Y/P_B/P_R$, Y/B- Y/R-Y, $Y/C_B/C_R$). Connect to terminals of the same colour.

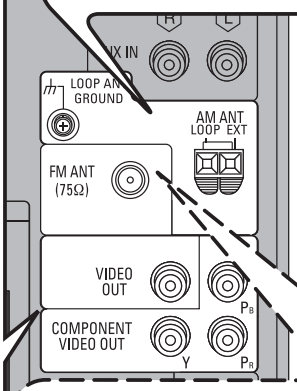
To enjoy progressive video
1. Connect to a progressive output compatible television.
2. Set "VIDEO OUT (I/P)" to "PROGRESSIVE", then follow the instructions on the menu screen (➞ page 23, "VIDEO" menu).

Antenna connections

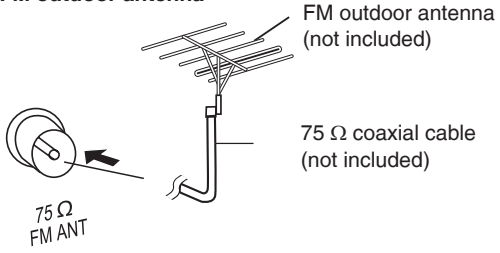
AM loop antenna



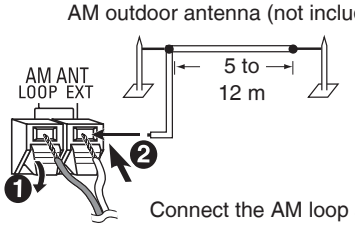
- Stand the antenna up on its base.
- Place the antenna where reception is best.



■ **FM outdoor antenna**



■ **AM outdoor antenna**



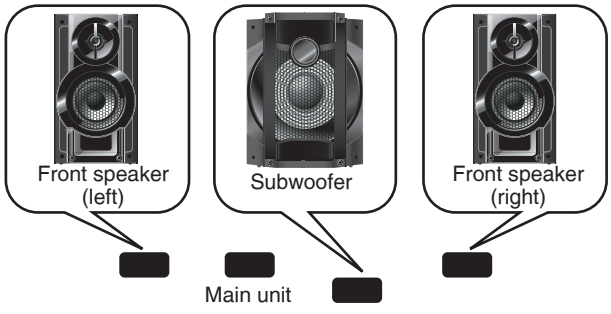
- Run a piece of vinyl wire horizontally across a window or other convenient location.
- Leave the loop antenna connected.

Optional antenna connections

Use outdoor antenna if radio reception is poor.

Note
- Disconnect the outdoor antenna when the unit is not in use.
- Do not use the outdoor antenna during a lightning storm.

Placement of speakers



Front speakers
Speakers are designed identically so that no left or right channel orientation is necessary.

Subwoofer
The subwoofer can be placed in any position as long as it is at a reasonable distance from the TV.

Use only the supplied speakers
- Using other speakers can damage the unit and sound quality will be negatively affected.
- Set the speakers up on an even surface to prevent them from falling. Take proper precautions to prevent the speakers from falling if you cannot set them up on an even surface.

Positioning for best effect
How you set up your speakers can affect the bass and the sound field. Note the following points.
- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with a thick curtain.

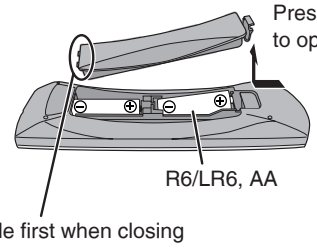
If irregular colouring occurs on your television
The supplied speakers are designed to be used close to a television, but the picture may be affected with some televisions and setup combinations.

If this occurs, turn the television off for about 30 minutes.
The television's demagnetizing function should correct the problem. If it persists, move the speakers further away from the television.

Note
- You cannot take the front net off the speakers
- Keep your speakers at least 10 mm away from the system for proper ventilation.
- You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.
- Reduce the volume in the following cases to avoid damage.
  – When playing distorted sound.
  – When the speakers emit strange noise (howling) from a microphone or record player, noise from FM broadcasts, or continuous signals from an oscillator, test disc, or electronic instrument.
  – When adjusting the sound quality.
  – When turning the unit on or off.

Caution
- Use the speakers only with the recommended system. Failure to do so can damage the amplifier and speakers, and can cause fire. Consult a qualified service person if damage occurs or if a sudden change in performance is apparent.
- Do not attach these speakers to walls or ceilings.

Preparing the remote control



Use
Aim at the remote control signal sensor (➥ page 9), avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Batteries
- Use a manganese dry battery or an alkaline dry battery
- Insert so the poles (+ and –) match those in the remote control.
- Remove if the remote control is not going to be used for a long period of time.
- Store in a cool, dark place.
- Do not heat or expose to flame.
- Do not leave the batteries in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.
- Mishandling of batteries can cause electrolyte leakage which can severely damage the remote control.

Do not:
- mix old and new batteries.
- use different types of the batteries at the same time.
- take apart or short circuit the batteries.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

DEMO function

The unit can display a demonstration of its functions when "DEMO ON".
Press and hold [■, –DEMO].
The display changes each time the button is held down.
DEMO ON ↔ DEMO OFF
While in standby mode, select "DEMO OFF" to reduce power consumption.

Note

When the DEMO function is on, the Dimmer switches off automatically.

EASY SETUP

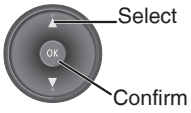
Turn on the television and select the appropriate video input on the television to suit the connection for the unit.

1 **Power ON.**

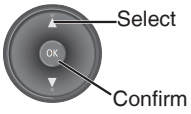
2 **Select "DVD/CD".**

3 **Display the SETUP menu.**

4 **Select "OTHERS".**

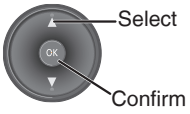


5 **Select "EASY SETUP".**

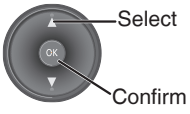


6 **Press to select "SET".**

7 **Select "YES".**



8 **Make the settings.**



9 **Press to finish EASY SETUP.**

10 **Press to exit.**

Setting the time

1 **Press [CLOCK/TIMER] to select "CLOCK".**

Every time you press the button:
CLOCK → ◴PLAY → ◴REC
↑— Original display ←

2 (Within 7 seconds or so) **Press [|◀◀, ∨/REW] or [▶▶|, ∧/FF] to set the time.**

3 **Press [CLOCK/TIMER] to finish setting the time.**

This is a 24-hour clock.

Displaying the time

Press [CLOCK/TIMER] once when the unit is on or in standby mode.

The time is displayed for a few seconds.

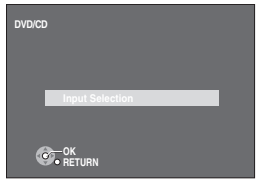
Note

Reset the clock regularly to maintain accuracy.

Selecting the source from the START menu

You can select desired source or access playback/menus by using the START menu.

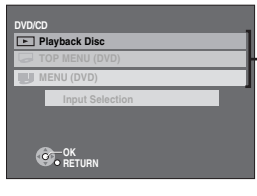
1 **Press [START] to show the START menu screen.**
This unit automatically turns on. (This works when in "DVD/CD" or "USB" mode without any disc/device being loaded/connected.)
Example:



2 **Press [OK] to confirm.**
• Press [START] to exit.

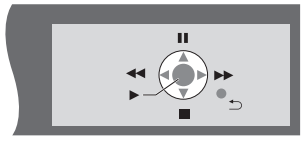
When "Input Selection" is selected
You can select a desired source from the menu.
• DVD/CD, FM, AM, AUX, USB, MUSIC PORT, TAPE

When a disc is loaded or an USB device is connected, you can also access playback or menus from the START menu
Example: **DVD-V**



playback/menu access

When the on-screen control panel appears
Example: **DVD-V** (when "Playback Disc" is selected from the START menu)



You can operate the playback with the indicated controls.

Selecting the source by remote control

DVD/CD	**DVD/CD:** (➡ page 15)
FM/AM EXT-IN	Each time you press the button: **FM:** (➡ page 24) **AM:** (➡ page 24) **MUSIC PORT:** For audio input through the MUSIC PORT terminal. **AUX:** For audio input through the AUX terminal.
USB	**USB:** (➡ page 26)
TAPE	**TAPE:** (➡ page 24)

Note
Confirm the audio connection to the AUX terminal on the main unit. Reduce the volume on the TV to its minimum, and then adjust the volume of the main unit.

Using the main unit

1 Turn on the unit.

⏻/I

2 Open the disc tray.

OPEN/ CLOSE

3 Place disc.

Label must face upward.

Disc tray

Load double-sided discs so the label for the side you want to play is facing up. (➡ page 7, Tray/disc handling procedure)

DVD-VR

Remove the disc from its cartridge before use.

4 Close the disc tray.

OPEN/ CLOSE

5 Start play.

DVD/CD or 1 2 3 4 5

You can also press [1 ▶] to [5 ▶] to select and play the other loaded discs.

Selecting the desired tray

1 2 3 4 5 → OPEN/ CLOSE → OPEN/ CLOSE

(Press again to close the tray)

Changing multiple discs

EXCHANGE

Press the button repeatedly to check and change multiple discs.

- The tray with a disc being played will not open.
- If the player is stopped, all trays will open.
- To close the remaining trays simultaneously, press [⏏, OPEN/CLOSE].

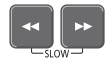
Note

- **DISC CONTINUES TO ROTATE WHILE MENUS ARE DISPLAYED.**
  Press [■] when you finish to preserve the unit's motor and your television screen.
- Total title number may not be displayed properly on +R/+RW.

Using the remote control

Volume adjustment

Search (during play)



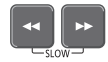
- Play speed increases up to 5 steps.
- Press [DVD/CD ▶] to continue normal play.

Stop

The stopped play position is memorized when “RESUME” is displayed.

- Press [DVD/CD ▶] to resume play.
- Press [■] again to clear the position.

Slow-motion (during pause)



- Play speed increases up to 5 steps.
- Press [DVD/CD ▶] to continue normal play.
- **VCD** Forward direction only.

Pause

Press [DVD/CD ▶] to resume play.

Frame-by-frame (during pause)

DVD-V **DVD-VR** **VCD**

- Press [DVD/CD ▶] to continue normal play.
- **DVD-VR** **VCD** Forward direction only.

Skip

Return to previous screen

Enter numbers

DVD-V **DVD-VR** **VCD** **CD**

Example: to select 12:

[≧10] → [1] → [2]

VCD with Playback control (PBC)

Press [■] and then press the numeric buttons to cancel the PBC functions.

Disc menus

DVD-V

Shows a disc top menu.

DVD-VR

Show the programs (➞ page 19).

DVD-V

Shows a disc menu.

DVD-VR

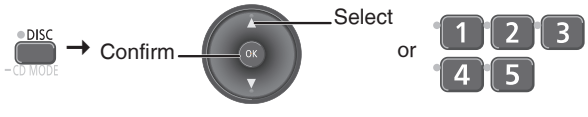
Shows a playlist.

VCD with Playback control (PBC)

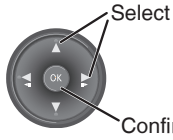
Shows disc menu.

Cancel the numbers

Selecting a disc



On-screen item select



Main unit display

DVD-V **DVD-VR** **WMA** **MP3** **MPEG4** **DivX**

Time display ↔ Information display

JPEG

SLIDE ↔ Information display

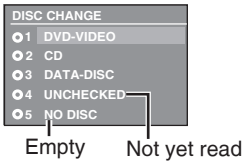
Disc information

You can select the disc after checking the discs loaded with the "DISC CHANGE" screen.

You can also select the disc directly with the disc buttons on the main unit.

1 Press [DISC] to show the "DISC CHANGE" screen.

Example:



2 Press the numeric buttons ([1] to [5]) to select and play the disc.

To clear the screen

Press [DISC].

All CDs play

VCD CD WMA MP3

This function allows you to play all loaded CDs in order and skips DVD, JPEG, MPEG4 and DivX discs.

While stopped with a CD in the current disc tray

1 Press and hold [–CD MODE].

2 Press [DVD/CD ▶].

To cancel

Press and hold [–CD MODE] while stopped.

(The function also cancels when you open the current disc tray, switch the unit to standby or select another source.)

Note

- You cannot change the mode during play, or while in program or random mode.
- Video CD playback control is disabled.

Repeat play

(Only when the elapsed play time can be displayed.
JPEG: Works with all JPEG contents.)

During play

Press [REPEAT] to select an item to be repeated.

Example: DVD-V

↻ TITLE → ↻ CHAP. → ↻ OFF

- To cancel, select "OFF".

Note

Items shown differ depending on the type of disc and playback mode.

Muting the volume

To mute the sound.

- To cancel, press the button again or adjust the volume.
- Muting is canceled when you switch the unit to standby.

Dimming the display

To dim the display panel.

Every time you press and hold the button:
Dim ↔ Original brightness

- The display is dimmed, but brightens when you perform some operations.

Program and Random play

Press [PLAY MODE] while stopped.
Program and random playback screens appear sequentially.

To exit program or random play mode
Press [PLAY MODE] several times while stopped.

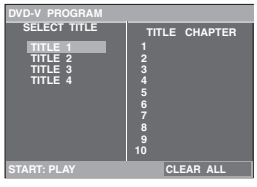
Program → Random → Off (Normal play) → Program

Program play (up to 30 items)

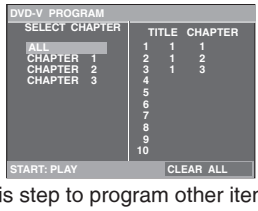
When CD MODE is off (➞ page 17)
DVD-V **VCD** **CD** **WMA** **MP3** **JPEG** **MPEG4** **DivX**

You can program all the items on a disc.

1 **While stopped, press [PLAY MODE].**
Example: **DVD-V**



2 **Press [▲,▼] to select an item and press [OK].**



- Repeat this step to program other items.
- Press [⮌, RETURN] to return to the previous menu.

3 **Press [DVD/CD ▶] to start play.**

When CD MODE is on (➞ page 17)
VCD **CD**

You can program all the items on all the discs.

1 **Press [▲,▼] to select the disc and press [OK].**
2 **Press [▲,▼] to select the item and press [OK].**
- Press [⮌, RETURN] to select other discs.
- Repeat steps 1 and 2 to program other items.

3 **Press [DVD/CD ▶].**

Selecting all items
Press [▲,▼] to select “ALL” and press [OK].
Clearing the program
Press [▶], then press [▲,▼] to select the item, and press [CANCEL].
Clearing the whole program
Press [▶] several times to select “CLEAR ALL” and press [OK].

Note
The program is retained in memory unless one of the following occurs:
– The current disc tray is opened.
– Another source is selected.
– The unit is switched to standby.
– CD MODE is turned on or off.
– You manually select another disc (while CD MODE is off).

Random play

When CD MODE is off (➞ page 17)
VCD **CD**

You can play all the items on a disc in random order.
DVD-V **WMA** **MP3** **JPEG** **MPEG4** **DivX**
You can play the selected item(s) on a disc in random order.

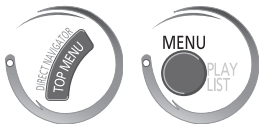
1 **While stopped, press [PLAY MODE] several times.**
Example: **DVD-V**

2 (Only when the disc has a groups or titles)
Press [▲,▼] to select a group or title and press [OK].
- “∗” will be displayed next to the selection.
  Press [OK] again to clear.
- To select all items in a disc, select “ALL”.

3 **Press [DVD/CD ▶].**

When CD MODE is on (➞ page 17)
VCD **CD**

You can play all the items on all the discs in random order.
Press [DVD/CD ▶].
Example: **CD**



Playing data discs

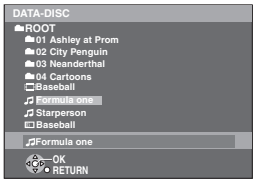
- **DVD-VR** Select “DATA” in “OTHERS” menu (➡ page 23) to play WMA, MP3, JPEG, MPEG4 or DivX.

Playing items in order (Playback Menu)

While “PLAYBACK MENU” is displayed
Press [▲,▼] to select “AUDIO/PICTURE” or “VIDEO” and press [OK].

Playing from the selected item (Navigation Menu)

While “DATA-DISC” screen is displayed
Press [▲,▼,◀, ▶] to select an item and press [OK].
- Repeat this step if there are multiple layers.



Group (Folder)*

Content (File)*
- MPEG4/DivX
- MP3, WMA
- JPEG

*Files are treated as contents and folders are treated as groups in these instructions.
- Press [⮌, RETURN] to go back to previous screen.
- Press [MENU] to display/exit the screen.

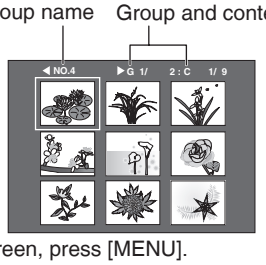
Select the picture in thumbnails menu

JPEG

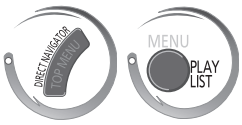
1 **While pictures are being displayed, press [TOP MENU] to display the thumbnails.**

2 **To select a picture in a group**
Press [▲,▼,◀, ▶] to select the picture and press [OK].
- Press [▶▶I, ⁄FF] to skip forward page by page.
- Press [I◀◀, ⁄REW] to skip backward page by page.

To select a picture in other groups
1. Press [▲] to select the group name.
2. Press [◀, ▶] to select the group and press [OK].
3. Press [▲,▼,◀, ▶] to select the picture and press [OK].



- To exit the screen, press [MENU].



Playing RAM and DVD-R/RW (DVD-VR) discs

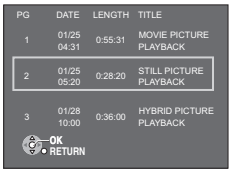
DVD-VR
- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, playlists and disc titles.

Playing the programs

1 **While stopped, press [DIRECT NAVIGATOR].**

2 **Press [▲,▼] to select the program.**
Press [◀, ▶] to skip page by page.

3 **Press [OK].**



Program menu

- To exit the screen, press [DIRECT NAVIGATOR].

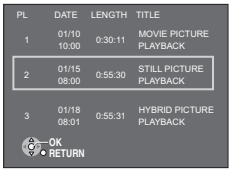
Playing the playlist

This works only when the disc contains a playlist.

1 **While stopped, press [PLAY LIST].**

2 **Press [▲,▼] to select the play list.**
Press [◀, ▶] to skip page by page.

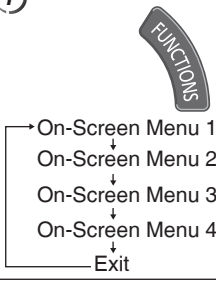
3 **Press [OK].**



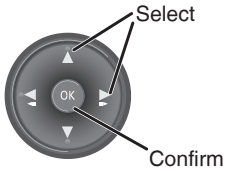
Playlist menu

- To exit the screen, press [PLAY LIST].

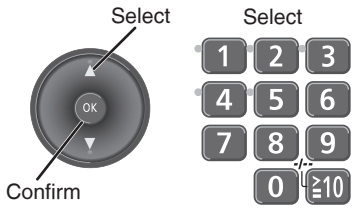
1 Show the on-screen menu.



2 Select the item.



3 Make the settings.



4 Press to exit.

Items shown differ depending on the type of disc as well as the recording format.

On-Screen Menu 1 (Disc/Play)		
e.g. **DVD-V** T9 C99	**PG SEARCH, PL SEARCH, TITLE SEARCH, CHAPTER SEARCH, TRACK SEARCH, CONTENT SEARCH**	**To start from a specific item** Press [▲,▼] to select and press [OK], or, press the numeric buttons. • **VCD** This does not work when using playback control (➞ page 38, Glossary).
♫	**AUDIO**	**DVD-V** **DivX** (with multiple soundtracks) **To select the soundtrack** **DVD-VR** **VCD** **To select "L", "R", "L+R" or "L R"** **DVD-V** (Karaoke disc) **To select "ON" or "OFF" for vocals** **To select "OFF", "V1", "V2" or "V1+V2" for vocal selections** Read the disc's instructions for details. **Signal type/data** LPCM/PPCM/DD Digital/DTS/MP3/MPEG: Signal type kHz (Sampling frequency)/bit/ch (Number of channels) Example: 3 /2 .1ch .1: Low frequency effect (not displayed if there is no signal) 0: No surround 1: Mono surround 2: Stereo surround (left/right) 1: Center 2: Front left + Front right 3: Front left + Front right + Center
▶▶	**PLAY SPEED**	**DVD-V** **DVD-VR** **To change play speed** – from "×0.6" to "×1.4" (in 0.1 units) Press [DVD/CD ▶] to return to the normal play. After you change the speed – Audio output switches to 2-channel stereo. – Sampling frequency of 96 kHz is converted to 48 kHz. • This may not work depending on the disc's recording.
↻	**REPEAT MODE**	(➞ page 17, Repeat play) **A-B Repeat** (To repeat a specified section) Except **JPEG** **MPEG4** **DivX** **DVD-VR** (still picture part) **VCD** (SVCD) Press [OK] at the starting and ending points. • Select "OFF" to cancel.
▭	**SUBTITLE**	**DVD-V** **DivX** (with multiple subtitles) **VCD** (SVCD only) **To select subtitle language** • On +R/ +RW, a subtitle number may be shown for subtitles that are not displayed. **DVD-VR** (with subtitle on/off information) **To select "ON" or "OFF"** • This may not work depending on the disc.
👥	**ANGLE**	**DVD-V** (with multiple angles) **To select a video angle**

On-Screen Menu 1 (Disc/Play) (continued)		
JPG DATE	**DATE DISPLAY**	**JPEG Displays the photograph date** **OFF ⟷ ON**
	ROTATION	**JPEG** (during pause) **To rotate the still picture** **0 ⟷ 90 ⟷ 180 ⟷ 270**

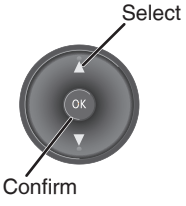
On-Screen Menu 2 (Video)		
	PICTURE MODE	**To select the picture quality for movie viewing** **NORMAL:** Normal images. **CINEMA1:** Mellows images and enhances detail in dark scenes. **CINEMA2:** Sharpens images and enhances detail in dark scenes. **DYNAMIC:** Enhances the contrast for powerful images. **ANIMATION:** Suitable for animation.
	ZOOM	**To select the zoom ratio** **JPEG** (during pause) **NORMAL → AUTO (DVD-V DVD-VR VCD) → X 2 → X 4** Zoom ratio will return to “NORMAL” while stopped, “RESUME STOP”, or when the disc tray is opened.
	TRANSFER MODE	**With COMPONENT VIDEO OUT connection** If you have set “VIDEO OUT (I/P)” to “PROGRESSIVE” (➡ page 23, “VIDEO” menu). **To select the method of conversion for progressive output to suit the type of material** • The setting will return to AUTO or AUTO1 when the disc tray is opened, the unit is turned off or another source is selected. **When playing PAL discs,** **AUTO:** Automatically detects the film and video content, and appropriately converts it. **VIDEO:** Select when using AUTO, and the content is distorted. **FILM:** Select this if the edges of the film content appear jagged or rough when AUTO is selected. However, if the video content is distorted, then select AUTO. **When playing NTSC discs,** **AUTO1** (normal): Automatically detects the film and video content, and appropriately converts it. **AUTO2:** In addition to AUTO1, automatically detects film contents with different frame rates and appropriately converts it. **VIDEO:** Select when using AUTO1 and AUTO2, and the content is distorted.
	SOURCE SELECT **DivX**	When you select “AUTO” the constructing method of the DivX contents is automatically distinguished and output. If the picture is distorted, select “INTERLACE” or “PROGRESSIVE” depending on which constructing method was used when the contents were recorded to disc. **AUTO, INTERLACE, PROGRESSIVE**

On-Screen Menu 3 (Audio)		
	DIALOGUE ENHANCER	**To make the dialogue in movies easier to hear** **DVD-V** (Dolby Digital, DTS, 3-channel or over, with the dialogue recorded in the centre channel) **DivX** (Dolby Digital, 3-channel or over, with the dialogue recorded in the centre channel) **OFF ⟷ ON**
	RE-MASTER	**To select the sound quality** **OFF → 1 → 2 → 3** • The actual effect depends on the selected source.

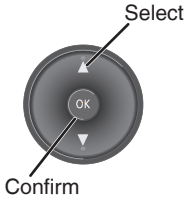
On-Screen Menu 4 (Karaoke)		
	KARAOKE MODE	**To select “ON” or “OFF” for Karaoke mode** (➡ page 28, Enjoying karaoke) • When you select “ON”, “PLAY SPEED” (➡ page 20) do not work.

1 Display the Setup menu.

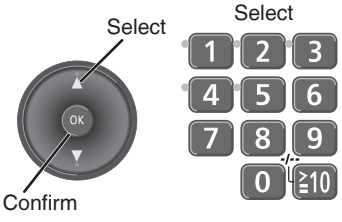
2 Select the menu.



3 Select the item.



4 Make the settings.



5 Press to exit.

- The settings remain intact even if you switch the unit to standby.
- Underlined items are the factory preset.

EASY SETUP enables successive settings of the items in the shaded area.

"DISC" menu

SETTING STATE	Display the current setting of the items below		
AUDIO Choose the audio language.	**ENGLISH** **OTHER ----**※3	**(LANGUAGE OPTIONS)**※1	**ORIGINAL**※2
SUBTITLE Choose the subtitle language.	**AUTO**※4 **OTHER ----**※3	**ENGLISH**	**(LANGUAGE OPTIONS)**※1
MENUS Choose the language for disc menus. Changing the menu language in EASY SETUP also changes this setting.	**ENGLISH**	**(LANGUAGE OPTIONS)**※1	**OTHER ----**※3
RATINGS Set a ratings level to limit DVD-Video play.	Setting ratings (When level 8 is selected) **0 LOCK ALL:** To prevent play of discs without ratings levels. **1 to 7:** To prohibit play of DVD-Video with corresponding ratings recorded on them. **8 NO LIMIT** When setting a ratings level, a password screen is shown. Follow the on-screen instructions. **Do not forget your password.** A message screen will be shown if a DVD-Video exceeding the ratings level is inserted in the unit. Follow the on-screen instructions.		
PASSWORD Change the password for "RATINGS" (➡ above).	1. Select "CHANGE" and press [OK]. 2. Enter the current password with the numeric buttons, then press [OK]. 3. Enter the new password with the numeric buttons, then press [OK]. If "VERIFY" is displayed, please verify the password and insert it again.		

※1 Language options :

For Australia and N.Z

FRENCH, GERMAN, DUTCH, POLISH, SPANISH, ITALIAN and SWEDISH

For Southeast Asia and Thailand

CHINESE

※2 The original language designated on the disc is selected.

※3 Input the appropriate code from the language code list (➡ page 37).

※4 If the language selected for "AUDIO" is not available, subtitles appear in that language (if available on the disc).

"VIDEO" menu

SETTING STATE	Display the current setting of the items below		
TV ASPECT Choose the setting to suit your television and preference.	• **16:9**: Widescreen television (16:9)		
	• **4:3PAN&SCAN**: Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc).		
	• **4:3LETTERBOX**: Regular aspect television (4:3) Widescreen picture is shown in the letterbox style.		
TIME DELAY When connected with an AV amplifier and Plasma display, adjust if you notice the audio is out of sync with the video.	**0 ms/AUTO** **60 ms**	**20 ms** **80 ms**	**40 ms** **100 ms**

"VIDEO" menu (continued)

NTSC DISC OUT Choose PAL60 or NTSC output when playing NTSC discs.	**NTSC:** Output signals from NTSC discs remains as NTSC. **PAL60:** NTSC discs can be viewed on PAL television. (**For Southeast Asia and Thailand** "NTSC" is the factory preset)
STILL MODE Specify the type of picture shown when paused.	**AUTO** **FIELD**[×5]**:** The picture is not blurred, but picture quality is lower. **FRAME**[×5]**:** Overall quality is high, but the picture may appear blurred.
VIDEO OUT (I/P) Select "PROGRESSIVE" only if connecting to a progressive output compatible television.	**INTERLACE** **PROGRESSIVE** When you select "PROGRESSIVE", a message screen will appear. For progressive output, press [▲] and then press [OK]. Press [⮌, RETURN] to cancel.

"AUDIO" menu

SETTING STATE	Display the current setting of the items below	
PCM OUTPUT Check the digital input limitations of the equipment you connect using COAXIAL terminal and select the maximum sampling frequency of PCM digital output.	**UP TO 48kHz:** When connected to equipment compatible with 44.1 or 48 kHz **UP TO 96kHz:** When connected to equipment compatible with 88.2 or 96 kHz • Signals from copy-protected discs are converted to 48 or 44.1 kHz. • Some equipment cannot handle sampling frequencies of 88.2 kHz, even if they can handle 96 kHz. Read your equipment's operating instructions for details.	
DOLBY DIGITAL With COAXIAL connection (➡ page 10)	**BITSTREAM** **PCM**	Select "BITSTREAM" when the equipment can decode the bitstream (digital form of multi-channel data). Otherwise, select "PCM". (If the bitstream is output to the equipment without a decoder, high levels of noise can be output and may damage your speakers and hearing.)
DTS With COAXIAL connection (➡ page 10)	**BITSTREAM** **PCM**	
MPEG [×6] With COAXIAL connection (➡ page 10)	**BITSTREAM** **PCM**	
DYNAMIC RANGE	**ON:** Adjusts for clarity even when the volume is low through compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital.) **OFF**	

"DISPLAY" menu

SETTING STATE	Display the current setting of the items below			
LANGUAGE Choose the language for the on-screen messages.	[×6] **ENGLISH**	**FRANÇAIS**	**DEUTSCH**	**ITALIANO**
	ESPAÑOL	**POLSKI**	**SVENSKA**	**NEDERLANDS**
	[×7] **ENGLISH**	繁體中文		

"OTHERS" menu

SETTING STATE	Display the current setting of the items below
REGISTRATION **DivX** Displays the unit's registration code.	**SHOW CODE:** You need this registration code to purchase and play DivX Video-on-Demand (VOD) content (➡ page 7, ABOUT DIVX VIDEO-ON-DEMAND).
JPEG TIME	To change the slideshow timing **1 SEC to 15 SEC (in 1 unit)** **15 SEC to 60 SEC (in 5 unit)** **60 SEC to 180 SEC (in 30 unit)** • **"3 SEC"** is the factory preset.
EASY SETUP	**SET:** Display the EASY SETUP settings
DVD-VR/DATA Select to play only DVD-VR or DATA format.	**DVD-VR:** To play the video programs on DVD-RAM or DVD-R/RW. **DATA:** To play the data files on DVD-RAM or DVD-R/RW.
SCREEN DIMMER This is to prevent burn mark on the television screen.	**OFF** **WAIT 5 MIN:** If there is no operation for 5 minutes, the pictures turns grey. The television screen would resume when you perform some operations. (This does not work during video playback.)
DEFAULTS This returns all values in the Setup menus to the default settings.	**RESET** The password screen is shown if "RATINGS" (➡ page 22) is set. Please enter the same password and press [OK], then turn the unit off and on again.

[×5] Refer to "Frame still and field still" (➡ page 38, Glossary).
[×6] **For Australia and N.Z**
[×7] **For Southeast Asia and Thailand**

The radio

Manual tuning

1 **Press [FM/AM] to select "FM" or "AM".**
2 **Press [◀◀] or [▶▶] (main unit: [∨/REW/I◀◀] or [∧/FF/▶▶I]) to select the frequency of the desired station.**
- "ST" is displayed when a stereo FM broadcast is being received.

If noise is excessive
When "FM" is selected
Press [PLAY MODE] to change to "MONO" mode.
To cancel, press **[PLAY MODE]** again.
The mode also cancels when you change the frequency.

When "AM" is selected
Press [FUNCTION] to select "BP 1" ↔"BP 2".
The setting is recalled whenever "AM" is selected.

AM frequency step (on main unit)
Except for Australia and N.Z
The step is factory-set to 9 kHz, but you can change it to receive broadcasts allocated to 10 kHz steps.
1 **Select "FM".**
2 **Press and hold [FM/AM] on the main unit.**
After a few seconds the display changes to show the current minimum frequency.
3 **Continue to hold down [FM/AM].**
When the minimum frequency changes, release the button.
To return to the original step, repeat the above steps.

Note
After changing the setting, previously preset frequencies will be cleared. Preset them again.

Preset tuning (by remote control only)

Preset channels to make selection simpler. 30 FM and 15 AM stations can be preset.

Automatic presetting

1 **Press [FM/AM] to select "FM" or "AM".**
2 **Press [MENU] to switch between "LOWEST" or "CURRENT" frequency.**
3 **Press and hold [OK] to start presetting. Release the button when "FM AUTO" or "AM AUTO" is displayed.**

The tuner presets all the stations it can receive into the channels in ascending order. "SET OK" is displayed when the stations are memorized and radio tunes to the last preset station.

Manual presetting

1 **Press [◀◀] or [▶▶] to tune to the required station.**
2 **Press [OK].**
3 **Press the numeric buttons to select a channel.**
For channels 10 to 30, press [≧10], then the two digits.

The station occupying a channel is erased if another station is preset to that channel.

Selecting a preset station
Press the numeric buttons to select the channel.
OR
Press [◀], [▶] or [I◀◀, ∨/REW], [▶▶I, ∧/FF] to select the channel.

Cassette tapes — Play and Recording

Play

You can use the deck for tape playback.
Use normal position tapes.
High position and metal position tapes can be played, but the unit will not be able to identify the characteristics of these tapes.

1 **Press [◀▶, TAPE].**
The unit turns on.
If a cassette was loaded, play starts automatically (One touch play).
2 **Press [▲, OPEN] on the main unit and insert the cassette.**

Side to be played facing towards you.

Insert the cassette with the exposed tape facing down.

Make sure that the cassette is fully inserted and close the lid by hand.
3 **Press [◀▶, TAPE] to start play.**
Every time you press the button:
F ▶↔ ◀ R
F ▶: Forward side is played.
◀ R: Reverse side is played.

Stop	■
Reverse mode	PLAY MODE

Every time you press [PLAY MODE]:

→ ⇄ → ⇄ → (⇄) →

⇄ : One side is played.
⇄ : Both sides are played.
(forward → reverse)
Play stops at the end of the reverse side.
(⇄): Both sides are played repeatedly until [■] (main unit: [■, –DEMO]) is pressed.

Fast-forward and rewind (while stopped)	I◀◀ ∨/REW ▶▶I ∧/FF
Finding the beginning of a track (TPS: Tape Program Sensor) (during play)	I◀◀ ∨/REW ▶▶I ∧/FF

TPS finds the beginning of a track and resumes play from there. Each press increases the number of tracks skipped, up to a maximum of 9.
TPS may not operate correctly in the following situations:
- If the interval between tracks is less than 4 seconds
- If there is noise between tracks
- If there are silent parts within tracks

Note
- Tapes exceeding 100 minutes are thin and can break or get caught in the mechanism.
- Tape slack can get caught up in the mechanism and should be taken up before the tape is played.
- Endless tapes can get caught up in the deck's moving parts if used incorrectly. Use tapes appropriate to this unit's auto-reverse mechanism.

Recording

Use normal position tapes.
High position and metal position tapes can be used, but the unit will not be able to record or erase them correctly.

Preparation
1 Wind up the leader tape so recording can begin immediately.
2 Press [◀▶, TAPE] and then [■].

1 **Press the deck [⏏, OPEN] on the main unit and insert the cassette to be recorded.**
The tape direction is automatically set to "F ▶".

2 **Press [PLAY MODE] to select the reverse mode.**
⇄ : One side only records.
⇄ : Both sides record (forward → reverse)
While recording, if a track is cut off in the middle at the end of the front side, it is re-recorded from the beginning on the reverse side. At the end of the reverse side, recording stops and the current track will be interrupted.
• "⇄" automatically changes to "⇄" when you start recording.

3 **Select the source to be recorded.**

Radio	Tune to the required station. (➞ The radio, page 24)
Disc(s)	❶ Insert the disc(s) you want to record. ❷ Press [DVD/CD ▶] and then [■] • Recording specific disc(s) or tracks (➞ Program play, page 18)
Music Port	➞ Using the Music Port, page 31
AUX	➞ Using an external unit, page 32
USB	❶ Connect the USB mass storage device (➞ USB — Play and Recording, page 26) ❷ Press [▶, USB] and then [■] • Recording specific tracks (➞ Program play, page 18)

4 **Press and hold [●, REC] followed by [TAPE] (main unit: [● REC, TAPE]) to start recording.**

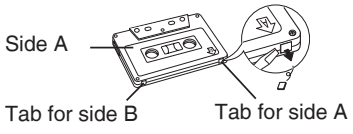
Stop recording

If the tape finishes before the disc
The disc continues playing. Press [■] (main unit: [■, –DEMO]) to stop it.

Erasing recordings

1 **Press [◀▶, TAPE] and then [■].**
2 **Press and hold [●, REC] followed by [TAPE] (main unit: [● REC, TAPE]) to start recording.**

Erasure prevention
Use a screwdriver or similar object to break out the tab.



To record on the tape again, cover the hole with adhesive tape.

Note
- Multi-channel sources are automatically down-mixed to 2 channels during recording.
- The volume, sound field and quality have no effects on recording.
- You cannot open the deck while recording.
- You cannot fast-forward or rewind the deck while recording.

Play

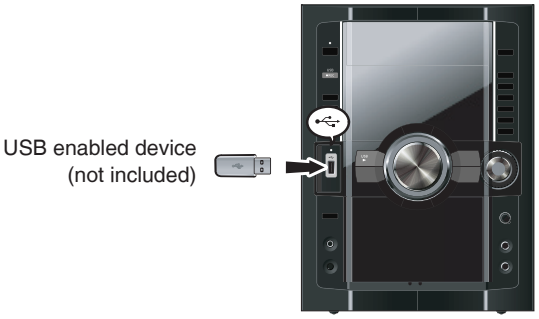
The USB connectivity enables you to connect and play tracks or files from USB mass storage class devices.
Typically, USB memory devices. (Bulk only transfer)

Preparation

Before connecting any USB mass storage device to the unit, ensure that the data stored therein has been backed up.

It is not recommended to use a USB extension cable.
The USB device is not recognised by this unit.

1 **Connect the USB mass storage device** (not included).



2 **Press [▶, USB] to begin playback.**

3 **Press [MENU] to display the USB menu.**

4 **Press [▲,▼] and then [OK] to select the desired item.**

For other operating functions, they are similar as those described in “DISC OPERATIONS” (➥ pages 15 to 23).

■ Compatible Devices

Devices which are defined as USB mass storage class:
– USB devices that support bulk only transfer.
– USB devices that support USB 2.0 full speed.

■ Supported Formats

	File name	File extension
Still pictures	JPG ※1	.jpg .jpeg
Music	MP3 WMA	.mp3 .wma
Video	MPEG4 ※2	.asf

※1 It may not be possible to play all the files due to the condition on how they were created.
※2 For Panasonic D-Snap/DIGA

Note

Maximum number of folders	255
Maximum number of files	4000
Maximum length of folder name	28
Maximum length of file name	28

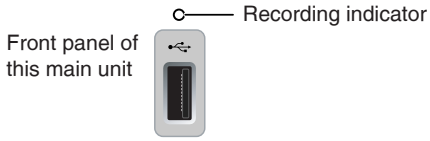
- CBI (Control/Bulk/Interrupt) is not supported.
- Digital Cameras that use PTP protocol or which require additional program installation when connected to a PC are not supported.
- A device using NTFS file system is not supported. [Only FAT 12/16/32 (File Allocation Table 12/16/32) file system is supported].
- Depending on the sector size, some files may not work.
- It will not operate with Janus enabled MTP (Media Transfer Protocol) devices.
- Only one memory card will be selected when connecting a multi-port USB card reader. Typically the first memory card inserted.

Recording

You can record sound or music tracks from the disc, radio, tape and other music sources to a USB mass storage device.

Note

- This function does not work during any “RANDOM” and “REPEAT” mode selection.
- A new folder is created each time you perform a recording. Depending on the USB’s memory, the folder’s sequence may change once the recording has completed.
- All tracks are recorded to .mp3 format.
- Do not remove the device or plug out the AC mains lead while recording, data could be lost.
- Voice mixing with CD from microphone cannot be recorded.
- Recording indicator blinks while recording in progress.



Recording of MP3 tracks

1 **Connect the USB mass storage device.**

2 **Insert the disc(s) you want to record.**

3 **Press [DVD/CD ▶] and then [■] twice.**
- If the disc contains mixed media (➥ Playing data discs, page 19)
- Recording specific disc(s) or tracks (➥ Program play, page 18)

4 **Press and hold [●, REC] followed by [USB] (main unit: [● REC, USB]) to start recording.**
- “READING” (blinking) → “DISCXXX” → “REC” (blinking) will be displayed.
- “PGM” is displayed if recording in Program mode.
- Folder and file created will be named “DISCXXX”, “TRKXXXXX” respectively.

5 **Press [■] to stop recording.**
“WRITING” is displayed for a few seconds.

Note

- MP3 file needs to be selected before recording can begin. All files in the current folder will be recorded.
- Non-MP3 files will be skipped.
- Files in subfolder will be ignored.
- No sound is output during recording. “MUTE” will be displayed if volume is adjusted.

Recording from audio disc (CDDA)

1 **Connect the USB mass storage device**

2 **Insert the disc(s) you want to record.**

3 **Press [DVD/CD ▶] and then [■] twice.**
Recording specific disc(s) or tracks
(➞ Program play, page 18)

4 **Press and hold [●, REC] followed by [USB] (main unit: [● REC, USB]) to start recording.**
- "READING" (blinking) → "DISCXXX" → "elapsed time" will be displayed.
- "PGM" is displayed if recording in Program mode.
- Folder and file created will be named "DISCXXX", "TRKXXXXX" respectively.

5 **Press [■] to stop recording.**
"WRITING" is displayed for a few seconds.

Note
- Recording is prohibited for disc encoded with copyright protection, "COPYRIGHT PROTECTED" will scroll on FL display for each protected track.
- When CD MODE is selected;
  – Select an audio disc, otherwise recording will not start.
  – Program mode is not applicable.
  – Non audio discs will be ignored.

Recording from other sources

Tape	**1 Connect the USB mass storage device** **2 Insert tape into the deck.** **3 Search the desired position and then [■]** Use TPS function for faster search (➞ Cassette tapes — Play and Recording, page 24) **4 Press and hold [●, REC] followed by [USB] (main unit: [● REC, USB]) to start recording.** " ⇄ " automatically changes to " ⇄ " when you start recording. **5 Press [■] to stop recording.** "WRITING" is displayed for a few seconds.
Radio	Tune to the required station. (➞ The radio, page 24)
Music Port	➞ Using the Music Port, page 31
AUX	➞ Using an external unit, page 32

Note
This unit will analyse the USB device before recording starts. "READING" will blink on FL display. The time taken to start recording may vary depending on the device used.

Track Divide

This function allows you to divide between tracks. You can choose;
- AUTO 5M, track is automatically divided every 5 minutes.
- MANUAL, press [OK] during recording to activate track divide. If the track is not divided manually, every 60 minutes, track will be divided automatically.

1 **Select "FM", "AM", "MUSIC PORT", "AUX" or "TAPE" selector and press [SETUP]. "TRDIVIDE" will be displayed at FL display.**

2 **Press [▲, ▼] to choose between "AUTO 5M" or "MANUAL".** "AUTO 5M" is default setting.

3 **Press [OK] to activate at any time of recording.**
- Recording track by track from tape.
- Skip unnecessary noise by making new track.

Note
If you press [OK] while using AUTO 5M mode during recording, the 5 minutes counts will be reset.

Erasing the recorded items

This function allows you to erase unwanted tracks quickly and easily.

1 **Press [▶, USB] and then [■] twice.**

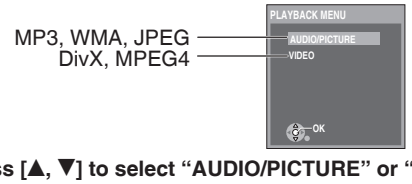
2 **Press [▲, ▼] to select.**

3 **Press [DEL] and a confirmation page will appear.**

4 **Press [◀, ▶] to choose "Yes" or "No" then press [OK]. File will be deleted if you choose "Yes" and "DELETING" will blink on the FL display.**

Erasing items in order (Playback Menu)

While "PLAYBACK MENU" is displayed



1 **Press [▲, ▼] to select "AUDIO/PICTURE" or "VIDEO" and press [OK].** When either one is selected, other file will become invisible and cannot be deleted.

2 **Press [DEL] to delete.**

3 **Repeat step 2 until all files are deleted.**

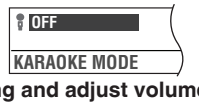
4 **Re-insert the device to continue.**
"RE-INSERT USB DEVICE" will scroll on FL display.

Note
- "USB WRITE PROTECTED" will scroll on FL display if the device is locked.
- Folders containing subfolders or unsupported files cannot be deleted.

Basic play

DVD-V **VCD**

1. **Turn [MIN, MIC VOL, MAX] on the main unit to "MIN" and connect the microphone (not included).**
   Microphone plug type: Ø6.3 mm monaural.
2. **Insert the disc and press [DVD/CD ▶] to play.**
3. **Press [FUNCTIONS] and select On-Screen Menu 4 to display KARAOKE mode. (➡ page 21).**



4. **Start singing and adjust volume with [+ VOL -] and [MIN, MIC VOL, MAX] (main unit).**

Note

- If a strange noise (howling) is emitted during use, move the microphone away from the speakers, or turn down the microphone volume.
- When you are not using the microphone, disconnect it from the microphone jack, and turn down the microphone volume level to minimum.
- During CDDA to USB recording time, mic input cannot be recorded to USB.
- Surround effects (➡ page 29) are disabled when mircophone is inserted.

Microphone volume adjustment

Every time you turn [MIN, MIC VOL, MAX] on the main unit to adjust the level: MIN ↔ .... ↔ MAX

Adding an echo effect

1. **Press [SOUND] to select "ECHO".**
2. **Press [◀, ▶] to change the level.**

ECHO 1 ↔ ECHO 2 ↔ ECHO 3 ↔ ECHO 4
↳ ECHO OFF ↲

- The effect increases with the level.
- Echo effect setting is only available when a microphone is connected.

Using Karaoke mode

1. **Press [FUNCTIONS] to display the Karaoke mode on-screen menu.**
2. **To select "ON", press [OK] followed by [▲,▼] and [OK] to confirm.**
3. **Press [▲,▼,◀, ▶] to select the item and [OK] to confirm.**
4. **Press [▲,▼] to make the settings and [OK] to confirm.**
   • To exit the screen, press [⮌, RETURN].

Items shown differ depending on the type of disc as well as the recording format.

KEY CONTROL	**Except** **MPEG4** **DivX** **To change the key of a song** **♭6 (lowest) to #6 (highest)** **OFF: Normal**
VOCAL CANCEL	**Except** **MPEG4** **DivX** Use this function on stereo sources to block out the vocals so you can sing along to the music. **OFF ↔ ON** This function is not suitable for the following sources. • Monaural recordings • Classical music or works performed by a limited number of instruments • Chorus works or duets
AUDIO CHANGE	**Solo** **DVD-V** **Duet** **OFF:** No vocal **OFF:** No vocal **ON:** Vocal **V1+V2:** Vocal 1 and 2 **V1:** Vocal 1 **V2:** Vocal 2 • Choose "OFF" for karaoke. • Choose "V1" or "V2" to duet with the player. **DVD-VR** **VCD** **and other sources** Television displays are shown in parentheses ( ). **L R:** Left channel sound is heard from the left speaker and right channel sound is heard from the right speaker — vocal and accompaniment. **L:** Only left channel sound — no vocal. **R:** Only right channel sound — vocal. **L+R:** Left channel sound is mix with the right channel sound and the mixed signal is output through the left and right speakers respectively. • Select "L" for karaoke. • "R" and "L" may be reversed.

To record your karaoke performance

Prepare for recording (➡ page 25).
Select the audio mode. (➡ see above)

1. **Turn [MIN, MIC VOL, MAX] to adjust the microphone volume.**
2. **Press [● REC, TAPE] on the main unit and then start singing.**

You can also use the microphone without any backing music.

1. **Press [● REC, TAPE] on the main unit and speak through the microphone.**
2. **Turn [MIN, MIC VOL, MAX] to adjust the microphone volume.**

• **To stop recording**
Press [■].

Note

To play the recorded tape, be sure to select the "L R" mode.

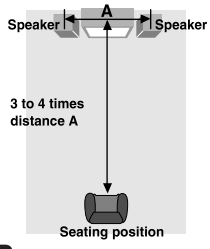
- The following sound effects may not be available or have no effect depending on the type of source, or when microphone(s) or headphones are inserted, or karaoke function is on or play speed is on.
- You may experience a reduction in sound quality when these sound field systems are used with some sources. If this occurs, turn the sound field system off.

Surround

Enjoy a surround-like effect when using front speakers. The effect broadens when playing discs with surround effects and sound seems to come from speakers on either side of you.
Press [SURROUND] (main unit: [SURROUND]).

STANDARD → STEREO → A. SRND

Optimum seating position



Note

- This does not work or has less effect with some discs.
- Choose “STEREO” if it causes distortion.
- Do not use in combination with surround effects on other equipment.

Changing the sound quality

Press [SOUND] to select a sound mode.
Every time you press [SOUND] on the remote control:

EQ → M.EQ → H.BASS → SUBW LVL → ECHO

■ Preset EQ

Press [SOUND] to select “EQ” and press [▶] to make selection:

HEAVY	: Adds punch to rock.
CLEAR	: Clarifies higher sounds.
SOFT	: For background music.
EQ-OFF	: Canceled (no effect is added).

■ Manual EQ

Create your own sound quality effects.

1 **Press [SOUND] to select “M.EQ”.**

2 **Change the sound quality with the cursor buttons.**

❶ Select the sound range to be adjusted with [◀] or [▶].

BASS ↔ MID ↔ TREBLE

❷ (Within 7 seconds or so)
Adjust the level with [**I◀◀, ∨/REW**] or [**▶▶I, ∧/FF**].
(–3 to +3)

Repeat step 2 to set the desired sound quality.
The original display is restored on the display panel in about 3 seconds.

On the main unit

1 **Press [MANUAL EQ].**
MID ↔ TREBLE
“BASS” is selected and adjusted by turning [– BASS CONTROL +].

2 **Adjust the level for “MID” and “TREBLE” with [∨/REW/I◀◀] or [∧/FF/▶▶I].**

The changes you make are stored and automatically recalled the next time you select “M.EQ”.

■ Enhancing the bass

You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal. The unit automatically selects the most suitable setting according to the type of playback source.

Press [SOUND] to select “H.BASS” and press [▶] to make selection: H. BASS ON ↔ H. BASS OFF

Pressing [H.BASS] on the main unit will also makes the “H.BASS”: H. BASS ON ↔ H. BASS OFF

■ Adjusting the subwoofer

Press [SOUND] to select “SUBW LVL” and press [▶] to make selection:

SUB W1 → SUB W2 → SUB W3

Pressing [SUBWOOFER] on the main unit also changes the setting.

■ Adding an echo effect

Enjoying karaoke (➥ page 28)

The play/record timer

You can set the timer to come on at a certain time to wake you up (play timer) or to record a radio station or from the external source (record timer). The play and record timers cannot be used together.

Preparation

- **Turn the unit on and set the clock (➞ Setting the time, page 13).**
- **For the play timer**, prepare the desired music source (cassette, CD, radio, external or USB) and set the volume.
- **For the record timer**, check the cassette's erasure prevention tabs (➞ Erasure prevention, page 25) and insert the tape in the deck (➞ Cassette tapes — Play and Recording, page 24) or plug in the USB (➞ USB — Play and Recording, page 26). Tune to the radio station (➞ The radio, page 24) or select the external source (➞ Using the Music Port, page 31 and Using an external unit, page 32).

1 **Press [CLOCK/TIMER] to select the timer function.**
Every time you press the button:
CLOCK → ◴PLAY → ◴REC
↳ Original display ↩
◴**PLAY**: to set the play timer
◴**REC**: to set the record timer

2 **(Within 7 seconds or so)**
"ON" time
❶ Press [|◀◀, ∨/REW] or [▶▶|, ∧/FF] to make the setting.
❷ Press [CLOCK/TIMER] to confirm.

"OFF" time
Repeat step ❶ and ❷ to make the setting.

3 **Press and hold [◴, –PLAY/REC] to display the timer indicator.**
◴PLAY → ◴REC (USB REC, TAPE REC) → (Off)
◴**PLAY**: to turn the play timer on
◴**REC**: to turn the record timer on
(The indicator does not appear if the "ON" and "OFF" times or the clock have not been set.)

4 **Press [⏻] to turn the unit off. The unit must be off for the timers to operate.**

To change the settings
Do steps 1, 2 and 4. (➞ above)

To change the source or volume
When the unit is on
1 **Press and hold [◴, –PLAY/REC] to clear the timer indicator from the display.**
2 **Make changes to the source or volume.**
3 **Do steps 3 to 4.** (➞ left)

To check the settings
Press [CLOCK/TIMER] while the unit is on to select "◴PLAY" or "◴REC".
The settings are shown in the following order:
Play timer: start time → finish time → source → volume
Record timer: start time → finish time → source

When the unit is off
1 **Press [CLOCK/TIMER].**
2 **During the clock display, press [CLOCK/TIMER] again.**

If you use the unit after the timers are set
After using, check that the correct tape or disc is loaded or USB is inserted before turning the unit off.

To cancel the timer
Press and hold [◴, –PLAY/REC] to clear the timer indicator from the display.

Note

- The play timer will start at the preset time with volume increasing gradually to preset level.
- The record timer will start 30 seconds before the set time with the volume muted.
- The timer comes on at the set time every day if the timer is on.
- The unit must be in the standby mode for the timer to function.
- If you turn the unit off and on again while a timer is functioning, the finish time setting will not be activated.
- If MUSIC PORT or AUX is selected as the source when the timer comes on, the system turns on and engages MUSIC PORT or AUX as the source. If you wish to playback or record from the portable audio equipment, just activate the equipment's play mode and increase the volume. (See the portable audio equipment's instruction manual.)

Auto-off function

Using the sleep timer/Auto-off function

Sleep timer: This timer turns the unit off after a set time.
Auto-off function: Only when disc, USB or tape is selected as the source. To save power, the unit turns off if it is left unused for 10 minutes.

While enjoying the desired source:
Press and hold [–SLEEP/A.OFF] to select a setting (minutes).
Every time you press the button:

SLEEP 30 → SLEEP 60 → SLEEP 90
SLEEPOFF ← AUTO OFF ← SLEEP120

The “SLP” or “A.OFF” indicator lights.

To confirm the remaining time
Press and hold [–SLEEP/A.OFF] once. The remaining time is shown for about 5 seconds.

To cancel the sleep timer
Press and hold [–SLEEP/A.OFF] to select “SLEEPOFF”.

To change the setting
Press and hold [–SLEEP/A.OFF] to select the new setting.

To cancel the Auto-off function
Press and hold [–SLEEP/A.OFF] to select “A.OFF” again.

Note

- The sleep timer will be turned off when you start recording.
- The sleep timer always has priority. Be sure not to overlap timer settings.
- You can use the sleep timer in combination with the play/record timer. Make sure the unit is off before the play/record timer’s start time.
- The Auto-off function is maintained even if the unit is turned off.

Using other equipment

Peripheral cables and equipment are sold separately unless otherwise indicated.

Before connection

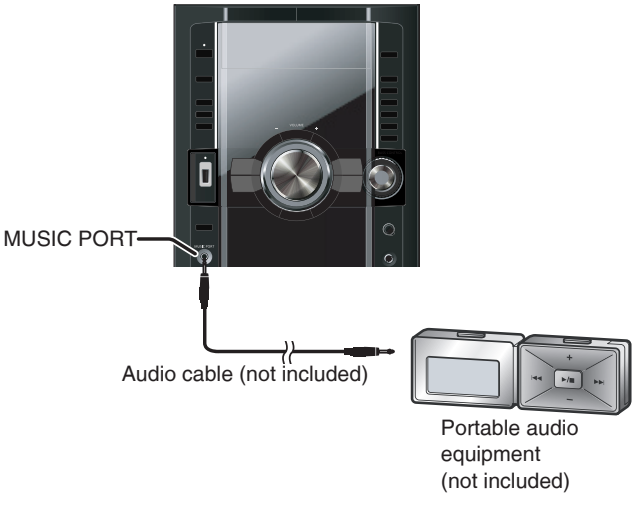
- Disconnect the AC mains lead.
- Turn off all equipment and read the appropriate operating instructions.
- The equipment connections described are examples only.

Using the Music Port

You can playback sound from portable audio equipment. Sound from the speaker may be distorted if the portable audio equipment’s equalizer (if any) is turned on. Turn it off before you plug into the MUSIC PORT jack.

Preparation

Reduce the volume of the unit and portable audio equipment before connecting or disconnecting.



1 **Connect the portable audio equipment.**
Plug type: Ø3.5 mm stereo

2 **Press [EXT-IN] to select “MUSIC PORT”.**
Every time you press the button:

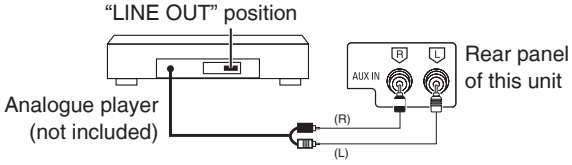
FM → AM → MUSIC PORT → AUX

3 **For listening :** Proceed to step 4.
For recording : Press [● REC, TAPE] on the main unit to start recording (Recording ➡ page 25).
Press [● REC, USB] on the main unit to start recording (Recording ➡ page 26).

4 **Playback the portable audio equipment.**
(For details, refer to the external unit’s instruction manual.)

Using an external unit

You can connect to an analogue player with a built-in phone equalizer.



1 **Press [EXT-IN] repeatedly until "AUX" is displayed.**

→ FM → AM → MUSIC PORT → AUX

2 **For listening :** Proceed to step 3.
For recording : Press [● REC, TAPE] on the main unit to start recording (Recording ➦ page 25).
Press [● REC, USB] on the main unit to start recording (Recording ➦ page 26).

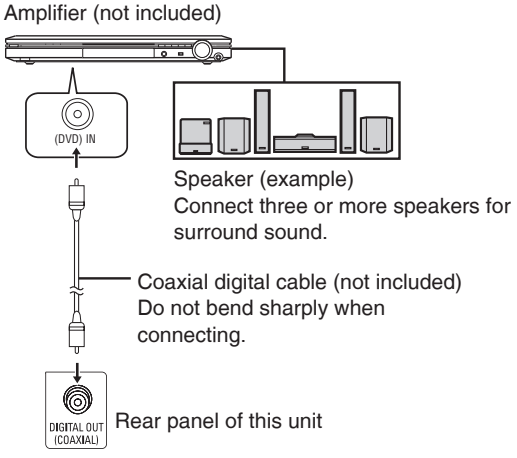
3 **Playback from the external source.**

Note

- For details, refer to the instruction manual of the unit which is to be connected.
- When units other than those described above are to be connected, please consult your audio dealer.
- Sound distortion may occur when you use an adaptor other than the one supplied.

Home Theater — Enjoying more powerful sound

Enjoy the powerful movie theater and hall-like sound available with multiple channel audio found on DVD-Video by connecting an amplifier and speakers.



Recording Output

- With DVD, the following conditions must be met:
  a) the disc does not have protection preventing digital recording, and
  b) the recording equipment can handle signals with a sampling frequency of 48 kHz.
- You cannot record WMA/MP3.

When recording DVDs, make the following settings.
– "SURROUND": "STANDARD" (➦ page 29).
– "PCM OUTPUT": "UP TO 48kHz" (➦ page 23, "AUDIO" menu).
– "DOLBY DIGITAL"/"DTS"/"MPEG": "PCM" (➦ page 23, "AUDIO" menu).

Operating a Panasonic television

Aim the remote control at the television for the following

	Turning the television on/off
	Switching the television's video input mode
	Adjusting the volume

Note

Some models cannot be operated by this remote control.

Changing the main unit and remote control mode

The remote control and main unit are factory-set to "REMOTE 1" mode.

If your remote control affects other equipment during operation, you can switch to operate in "REMOTE 2" mode.

To switch to "REMOTE 2" mode

1 **While pressing and holding [EXT-IN] on the main unit**
Press and hold [2] on the remote control until "REMOTE 2" appears on the main unit display.

2 **Press and hold [OK] and [2] on the remote control for at least 2 seconds.**
The main unit and remote control are now set to operate in "REMOTE 2" mode.

To return to "REMOTE 1" mode

Perform steps 1 and 2 but use [1] instead of [2] for both steps. ("REMOTE 1" appears on the main unit during step 1.)

The remote control cannot work with the main unit if their modes are different.

"REMOTE 1" or "REMOTE 2" appears on the main unit display when you operate the remote control.※

※ If "REMOTE 1" appears (The main unit is in "REMOTE 1" mode.)
Press and hold [OK] and [1] on the remote control for at least 2 seconds.

※ If "REMOTE 2" appears (The main unit is in "REMOTE 2" mode.)
Press and hold [OK] and [2] on the remote control for at least 2 seconds.

Note

You can still operate a television using the remote control (➡ left) even after switching the mode.

Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, consult your dealer for instructions.

■ Power		Page
No power.	• Insert the AC mains lead securely.	10
The unit is automatically switched to the standby mode.	• The unit was switched to standby by the sleep timer or auto-off function.	31

■ Operation		Page
No response when any buttons are pressed.	• This unit cannot play discs other than the ones listed in these operating instructions. • The unit may not be operating properly due to lightning, static electricity or some other external factor. Turn the unit OFF and then back to ON. Alternatively, press [⏻] to switch the unit to standby mode, disconnect the AC mains lead, and then reconnect it. • Condensation has formed. Wait 1 to 2 hours for it to evaporate.	5, 6 – –
No operations can be performed with the remote control.	• Check that the batteries are installed correctly. • The batteries are depleted: replace them with new ones. • Point the remote control at the remote control sensor and operate. • The remote control and main unit are in different modes. Change the remote control mode to match the main unit mode.	12 12 9, 12 33
Cannot play DVDs.	• CD MODE is on. Press and hold [–CD MODE] to turn CD MODE off.	17
No picture or sound.	• Check the video or audio connection. • Check the power or input setting of the connected equipment. • Check that the disc has something recorded in it.	10, 11 – –
You have forgotten your ratings password. Reset all the settings to Factory Preset.	• While stopped and “DVD/CD” is the source, press and hold [■, –DEMO] on the main unit and [≧10] on the remote control until “INITIALIZED” disappears from the television. Turn the unit off and on again. All settings will return to the default values.	–
Other products respond to the remote control.	• Change the remote control operating mode.	33

■ Specific operation impossible or incorrect		Page
It takes time before play starts.	• Play may take time to begin when an MP3 track has still picture data. Even after the track starts, the correct play time will not be displayed. • This is normal on DivX video. **DivX**	– –
Play does not start.	• This unit may not play WMA and MPEG4 that contains still picture data. • If a disc contains CD-DA and other formats, proper playback may not be possible. • **DivX** If playing DivX VOD content, refer to the website where you purchased it. (Example: www.divx.com/vod)	– – 7
Folders deeper than the eighth layer on a data disc are not displayed correctly. **WMA** **MP3** **JPEG** **MPEG4** **DivX**	• Folders deeper than the eighth layer are displayed as the eighth layer.	–
A menu screen appears during skip or search.	• This is normal for Video CDs.	–
Playback control menu doesn’t appear. **VCD** with playback control	• Press [■] twice and then press [DVD/CD ▶].	–
The program and random play functions do not work. **DVD-V**	• These functions do not work with some DVD-Videos.	–
Programmed items are not played. **DVD-V**	• Some items cannot be played even if you have programmed them.	–

■ Subtitle		Page
No subtitles.	• Display the subtitles (“SUBTITLE” in On-Screen Menu 1 (Disc/Play)). • Subtitles may not be displayed depending on the disc. **DivX**	20 20
Cannot select alternative languages.	• Try selecting from the disc’s menu if one is available.	22

■ A-B repeat		Page
Point B is automatically set.	• The end of an item becomes point B when it is reached.	20

■ Sound		Page
No sound.	• Check the connections. • Turn the volume up. • There may be a pause in sound when you change the play speed. • DivX Audio may not be output due to how files were created.	10 – 20 –
Sound is distorted.	• Noise may occur when playing WMA.	–
Effects do not work.	• Some audio effects do not work or have less effect with some discs.	–
Humming heard during play.	• An AC mains lead or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables.	–

■ Menus		Page
The SETUP menu cannot be accessed.	• Select "DVD/CD" as the source. • Cancel program and random play.	– 18

■ Picture incorrect		Page
Picture distorted.	• Some distortion is normal during SEARCH. • Ensure that the unit is connected directly to the television, and is not connected through a video cassette recorder. • Change "SOURCE SELECT" in On-Screen Menu 2 (Video). DivX	16 11 21
No picture.	• Check the connection. • Ensure the television's video input setting is correct.	10, 11 –
The television may display incorrectly or colours appear faded.	• The unit and television are using different video systems. – Use the multi-system or NTSC television. • The system used on the disc does not match your television. – PAL discs cannot be correctly viewed on an NTSC television. – This unit can convert NTSC signals to PAL 60 for viewing on a PAL television ("NTSC DISC OUT" in "VIDEO" menu).	– 22, 23
Picture stops. DivX	• Picture may stop if the DivX files are greater than 2 GB.	–
Menus not displayed correctly.	• Change the zoom ratio to "NORMAL". • Change "TV ASPECT" in "VIDEO" menu.	21 22
Auto zoom function does not work well.	• Turn off television zoom function. • Use the other preset aspect ratios or manual adjustment. • Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.	– 22 –
When playing PAL disc, picture distorted.	• Set "TRANSFER MODE" in On-Screen Menu 2 to "AUTO".	21

■ Progressive video		Page
There is ghosting when progressive output is on.	• This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output. Change "VIDEO OUT (I/P)" in "VIDEO" menu to "INTERLACE".	23
Picture not in progressive output.	• Select "PROGRESSIVE" in "VIDEO OUT (I/P)" in "VIDEO" menu. • If the unit is connected to the television through VIDEO OUT terminal, output will be interlace, even if "PRG" is displayed.	23 11

■ Listening to the radio		Page
Noise is heard. **"ST" flickers or doesn't light.** **Sound is distorted.**	• Adjust the position of the FM or AM antenna. • Use an outdoor antenna. • Press [PLAY MODE] to select "MONO".	11 11 24
A beat sound is heard.	• Turn the television off or separate it from the unit. • Switch to either BP1 or BP2.	– 24
A low hum is heard during AM broadcasts.	• Separate the antenna from other cables and cords.	–

■ Using the cassette deck		Page
Poor quality sound.	• Clean the heads.	37
Recording is not possible.	• If the erasure prevention tabs have been removed, cover the holes with adhesive tape.	25

■ Disc trays		Page
Disc tray(s) cannot open. **"CHGR ERR" is displayed.**	• Press [⏻/I] to release the jammed tray(s) as the unit will switch off. Switch it on again and the tray(s) will initialize to the previous tray(s) condition. • If this still does not fix the problem, please consult the dealer.	15 –

■ USB		Page
The USB drive or it's contents cannot be read.	• The USB drive format or it's contents is/are not compatible with the system. • The USB host function of this product may not work with some USB devices. • USB devices with storage capacity of more than 32 GB may not work in some instances.	26 – –
Slow operation of the USB device.	• Large file size or high memory USB device takes longer time to read and display on the TV.	–
USB recording stop suddenly "REC ERROR".	• Error happens during USB recording. Disconnect the USB device and then reconnect again.	–
"NO DEVICE"	• You haven't inserted a USB; insert one. • You haven't inserted the USB correctly; insert it correctly. • USB device is removed during playback.	– 26 –

■ Unit displays		Page
Although the unit is in standby mode, the display lights up and changes continuously.	• Turn off the demo function. (If you set the clock, the demo function turns off automatically.)	13
The display is dark.	• Press and hold [–DIMMER] to brighten the display.	17
"NO PLAY"	• You inserted a disc which the unit cannot play; insert one that can. • You inserted a blank disc. • You inserted a disc that has not been finalized.	5 – –
"NO DISC"	• You haven't inserted a disc; insert one. • You haven't inserted the disc correctly; insert it correctly.	– 7, 15
"NO DEVICE"	• USB device is removed during recording.	–
"OVER CURRENT ERROR"	• The USB device is drawing too much power. Switch to DVD/CD mode, remove the USB and turn the unit off.	–
"DEVICE FULL"	• USB device is full. Insert an empty one. • Total USB remaining recording (REC) time is less than the total time of the music source. Change to a USB device which has a higher memory capacity and perform the recording again.	– –
"FOLDER FULL"	• Total number of USB folders exceeds 255.	26
"FILE FULL"	• The numbers of USB files exceeds 4000.	26
"NO MP3"	• Select MP3 track before recording can begin.	26
"F61"	• Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer.	10
"F76"	• There is a power supply problem. Consult the dealer.	–
"DVD U11"	• Disc is dirty. Wipe it clean.	7
"ERROR"	• Incorrect operation performed. Read the instructions and try again. • Appears during recording. This operation is invalid during recording. • You are not able to open or close disc tray when recording from AM source.	– – –
"DVD H □□" **"DVD F □□"** □ stands for a number.	• Trouble may have occurred. The numbers following "H" and "F" depend on the status of the unit. **Reset procedure:** Press [⏻] to switch the unit to standby mode and then back to ON. Alternatively, press [⏻] to switch the unit to standby mode, disconnect the AC mains lead, and then reconnect it. If the service numbers fail to clear, note the service number and contact a qualified service person.	–
"REMOTE 1" or "REMOTE 2"	• Match the modes on the main unit and remote control. Depending on the number being displayed ("1" or "2"), press and hold [OK] and the corresponding numeric button ([1] or [2]) for at least 2 seconds.	33

■ Television displays		Page
"THIS DISC CANNOT BE PLAYED IN YOUR REGION"	• You can only play DVD-Video if their region number is the same or includes the same region number as the unit or if the DVD-Video is marked "ALL". Confirm the region number for the unit on the back of the main unit.	Cover
"⃠"	• The operation is prohibited by the unit or disc.	–
"AUTHORIZATION ERROR"	• You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit. **DivX**	7
"RENTED MOVIE EXPIRED" or "RENTAL EXPIRED"	• The DivX VOD content has zero remaining plays. You cannot play it. **DivX**	7

Language code list

Abkhazian:	6566	Danish:	6865	Italian:	7384	Norwegian:	7879	Swedish:	8386
Afar:	6565	Dutch:	7876	Japanese:	7465	Oriya:	7982	Tagalog:	8476
Afrikaans:	6570	English:	6978	Javanese:	7487	Pashto, Pushto:	8083	Tajik:	8471
Albanian:	8381	Esperanto:	6979	Kannada:	7578	Persian:	7065	Tamil:	8465
Ameharic:	6577	Estonian:	6984	Kashmiri:	7583	Polish:	8076	Tatar:	8484
Arabic:	6582	Faroese:	7079	Kazakh:	7575	Portuguese:	8084	Telugu:	8469
Armenian:	7289	Fiji:	7074	Kirghiz:	7589	Punjabi:	8065	Thai:	8472
Assamese:	6583	Finnish:	7073	Korean:	7579	Quechua:	8185	Tibetan:	6679
Aymara:	6589	French:	7082	Kurdish:	7585	Rhaeto-Romance:	8277	Tigrinya:	8473
Azerbaijani:	6590	Frisian:	7089	Laotian:	7679	Romanian:	8279	Tonga:	8479
Bashkir:	6665	Galician:	7176	Latin:	7665	Russian:	8285	Turkish:	8482
Basque:	6985	Georgian:	7565	Latvian, Lettish:	7686	Samoan:	8377	Turkmen:	8475
Bengali; Bangla:	6678	German:	6869	Lingala:	7678	Sanskrit:	8365	Twi:	8487
Bhutani:	6890	Greek:	6976	Lithuanian:	7684	Scots Gaelic:	7168	Ukrainian:	8575
Bihari:	6672	Greenlandic:	7576	Macedonian:	7775	Serbian:	8382	Urdu:	8582
Breton:	6682	Guarani:	7178	Malagasy:	7771	Serbo-Croatian:	8372	Uzbek:	8590
Bulgarian:	6671	Gujarati:	7185	Malay:	7783	Shona:	8378	Vietnamese:	8673
Burmese:	7789	Hausa:	7265	Malayalam:	7776	Sindhi:	8368	Volapük:	8679
Byelorussian:	6669	Hebrew:	7387	Maltese:	7784	Singhalese:	8373	Welsh:	6789
Cambodian:	7577	Hindi:	7273	Maori:	7773	Slovak:	8375	Wolof:	8779
Catalan:	6765	Hungarian:	7285	Marathi:	7782	Slovenian:	8376	Xhosa:	8872
Chinese:	9072	Icelandic:	7383	Moldavian:	7779	Somali:	8379	Yiddish:	7473
Corsican:	6779	Indonesian:	7378	Mongolian:	7778	Spanish:	6983	Yoruba:	8979
Croatian:	7282	Interlingua:	7365	Nauru:	7865	Sundanese:	8385	Zulu:	9085
Czech:	6783	Irish:	7165	Nepali:	7869	Swahili:	8387		

Memory reset (Initialization)

When the following situations occur, reset the memory:
- There is no response when buttons are pressed.
- You want to clear and reset the memory contents.

To reset memory

1 **Disconnect the AC mains lead. (Wait at least 3 minutes before proceeding to step 2.)**

2 **While pressing and holding down [⏻/I] on the main unit, reconnect the AC mains lead.**

" ---------" appears on the display.

3 **Release [⏻/I].**

All the settings are returned to the factory preset. You will need to reset the memory items.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.
- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.
- Cleaning of the lens is generally unnecessary although this depends on the operating environment.
- Do not use commercially available lens cleaners as they may cause a malfunction.

For a cleaner crisper sound (cassette deck)

Clean the heads regularly to assure good quality playback and recording. Use a cleaning tape (not included).

Before moving the unit, ensure the disc tray is empty. Failure to do so will risk severely damaging the disc and the unit.

Decoder
A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

DivX
DivX is a popular media technology created by DivX, Inc. DivX media files contain highly compressed video with high visual quality that maintains a relatively small file size.

Dolby Digital
This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

DTS (Digital Theater Systems)
This surround system is used in many movie theaters around the world. There is good separation between the channels, so realistic sound effects are possible.

Dynamic range
Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs.

Film and video
DVD-Videos are recorded using either film or video. This unit can determine which type has been used, then uses the most suitable method of progressive output.

Film: Recorded at 25 frames per second (PAL discs) or 24 frames per second (NTSC discs). (NTSC discs recorded at 30 frames per second as well). Generally appropriate for motion picture films.

Video: Recorded at 25 frames/50 fields per second (PAL discs) or 30 frames/60 fields per second (NTSC discs). Generally appropriate for TV drama programs or animation.

Frame still and field still
Frames are the still pictures that go together to make a moving picture.
There are about 30 frames shown each second.
One frame is made up of two fields. A regular television shows these fields one after the other to create frames.
A still is shown when you pause a moving picture. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high.
A field still is not blurred, but it has only half the information of a frame still so picture quality is lower.

I/P/B
I: Intra coded picture
This picture has the best quality and is the best to use when adjusting the picture.
P: Predictive coded picture
This picture is calculated based on past I or P-pictures.
B: Bidirectionally-predictive coded picture
This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

JPEG (Joint Photographic Experts Group)
This is a system used for compressing/decoding colour still pictures. If you select JPEG as the storage system on digital cameras, etc., the data will be compressed to 1/10–1/100 of its original size. The benefit of JPEG is less deterioration in picture quality considering the degree of compression.

Linear PCM (Pulse Code Modulation)
These are uncompressed digital signals, similar to those found on CDs.

MP3 (MPEG Audio Layer 3)
An audio compression method that compresses audio to approximately one tenth of its size without any considerable loss of audio quality.

MPEG4
A compression system for use on mobile devices or a network, that allows highly efficient recording at a low bit rate.

Playback control (PBC)
If a Video CD has playback control, you can select scenes and information with menus.

Progressive/Interlace
The PAL video signal standard has 576 interlaced (i) scan lines, whereas progressive scanning, called 576p, uses twice the number of scan lines. For the NTSC standard, these are called 480i and 480p respectively.
Using progressive output, you can enjoy the high-resolution video recorded on media such as DVD-Video.
Your television must be compatible to enjoy progressive video.

Sampling frequency
Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding).
Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

WMA (Windows Media™ Audio)
WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

Specifications

■ AMPLIFIER SECTION

RMS Output Power Stereo
- **Front Ch (both ch driven)** 125 W per channel (3 Ω), 1 kHz, 10 % THD
- **Subwoofer Ch** 250 W per channel (6 Ω), 100 Hz, 10 % THD

Total RMS Stereo mode power 500 W
PMPO output power 5500 W

■ FM/AM TUNER SECTION

Preset Memory FM 30 stations, AM 15 stations

Frequency Modulation (FM)
- **Frequency range** 87.50 MHz to 108.00 MHz (50 kHz step)
- **Antenna terminals** 75 Ω (unbalanced)

Amplitude Modulation (AM)

For Australia and N.Z 522 kHz to 1629 kHz (9 kHz step)

For others 522 kHz to 1629 kHz (9 kHz step), 520 kHz to 1630 kHz (10 kHz step)

■ TERMINALS SECTION

Digital audio output
- **Coaxial digital output** Pin jack

Music Port (front) jack
- **Terminal** Stereo, 3.5 mm jack
- **Sensitivity** 200 mV, 4.7 kΩ

Phone jack
- **Terminal** Stereo, 3.5 mm jack

Mic jack
- **Terminal** Mono, 6.3 mm jack (2 system)
- **Sensitivity** 0.7 mV, 1.2 kΩ

AUX
- **Terminal** RCA jack

■ DISC SECTION

Disc played (8 cm or 12 cm)

(1) DVD (DVD-Video, DivX[×6,×7])
(2) DVD-RAM (DVD-VR, JPEG[×4,×7], MP3[×2,×7], MPEG4[×5,×7], DivX[×6,×7])
(3) DVD-R (DVD-Video, DVD-VR, JPEG[×4,×7], MP3[×2,×7], MPEG4[×5,×7], DivX[×6,×7])
(4) DVD-R DL (DVD-Video, DVD-VR)
(5) DVD-RW (DVD-Video, DVD-VR, JPEG[×4,×7], MP3[×2,×7], MPEG4[×5,×7], DivX[×6,×7])
(6) +R/+RW (Video)
(7) +R DL (Video)
(8) CD, CD-R/RW (CD-DA, Video CD, SVCD[×1], MP3[×2,×7], WMA[×3,×7], JPEG[×4,×7], MPEG4[×5,×7], DivX[×6,×7])

[×1] Conforming to IEC62107
[×2] MPEG-1 Layer 3, MPEG-2 Layer 3
[×3] Windows Media Audio Ver.9.0 L3
Not compatible with Multiple Bit Rate (MBR)
[×4] Exif Ver 2.1 JPEG Baseline files
Picture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.
[×5] MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders
Conforming to SD VIDEO specifications (ASF standard)/ MPEG4 (Simple Profile) video system/ G.726 audio system
[×6] Plays DivX® video.
[×7] The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 255 groups (excluding root folder).

Pick up
- **Wavelength**
  - **CD** 785 nm
  - **DVD** 655 nm
- **Laser power** CLASS 1

Audio output (Disc)
- **Number of channels** (FL, FR), 2 ch

■ USB SECTION

USB Port
- **USB Standard** USB 2.0 full speed
- **Media file format support** MP3 (×.mp3), WMA (×.wma), JPEG (×.jpg, ×.jpeg), DivX (×.divx, ×.avi), MPEG4 (×.asf)
- **USB device file system** FAT 12, FAT 16, FAT 32
- **USB port power** 500 mA (Max)
- **Bit rate** up to 4 Mbps (DivX)

USB Recording
- **Bit Rate** 128 kbps
- **USB recording speed** 1x
- **Recording file format** MP3 (*.mp3)

■ CASSETTE DECK SECTION

Type Auto Reverse
Track system 4-Track, 2 Channel
Heads
- **Record/playback** Solid permalloy head
- **Erasure** Double gap ferrite head

Motor DC servo motor
Recording system AC bias 100 kHz
Erasing system AC erase 100 kHz
Tape speed 4.8 cm/s
Overall frequency response (+3, –6 dB) at DECK OUT
- **Normal** 35 Hz to 14 kHz

S/N ratio 50 dB (A weighted)
Wow and flutter 0.18 % (WRMS)
Fast forward and rewind time Approx. 120 seconds with C-60 cassette tape

■ VIDEO SECTION

Video system PAL625/50, PAL525/60, NTSC
Composite video output
- **Output level** 1 Vp-p (75 Ω)
- **Terminal** Pin jack (1 system)

Component video output
- **Y output level** 1 Vp-p (75 Ω)
- **P_B output level** 0.7 Vp-p (75 Ω)
- **P_R output level** 0.7 Vp-p (75 Ω)

Terminal Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

■ SPEAKER SECTION

Front Speakers
Type 2 way, 2 speaker system (Bass reflex)
Speaker unit(s) Impedance 3 Ω
- **1. Tweeter** 6 cm cone type
- **2. Woofer** 16 cm cone type

Input power (IEC) 125 W (Max)
Output sound pressure 83 dB/W (1.0m)
Frequency range 33 Hz to 28 kHz (-16dB), 40 Hz to 26 kHz (-10dB)
Dimensions (WxHxD) 221 mm x 401 mm x 244 mm
Mass 3.7 kg

Subwoofer
Type 1 way, 1 speaker system (Bass reflex)
Speaker unit(s) Impedance 6 Ω
- **1. Woofer** 25 cm cone type

Input power (IEC) 250 W (Max)
Output sound pressure 82 dB/W (1.0m)
Frequency range 48 Hz to 250 Hz (-16dB), 50 Hz to 200 Hz (-10dB)
Dimensions (WxHxD) 320 mm x 414 mm x 327 mm
Mass 7.1 kg

■ GENERAL

Power supply

For Australia and N.Z AC 220 to 240 V, 50 Hz

For others AC 110 to 127 V/220 to 240 V, 50/60 Hz

Power consumption 103 W
Dimensions (WxHxD) 250 mm x 331 mm x 334 mm
Mass 4.9 kg
Operating temperature range 0 °C to +40 °C
Operating humidity range 35 % to 80 % RH (no condensation)

Power consumption in standby mode	0.4 W (approximate)

Note
1. Specifications are subject to change without notice.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Panasonic Corporation
Web Site: http://panasonic.net

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